LETTERS

Neuroscientists Need Neuroethics Teaching

With the advancement of neurosciences in recent years, there is a growing need to ensure that its students are educated in applied neuroethics as part of their formal studies. However, neuroethics education is not commonly an integrated part of neuroscience training. Discussions we have had with members of the Russell group, an association of the 20 major research-intensive universities in the United Kingdom, indicate that the majority of their neuroscience students do not receive formal neuroethics teaching.

Neuroscience research findings have begun to have far-reaching ethical implications on education, treatment, and even the law. For example, ascertaining that cognitive enhancing drugs not only improve performance in neuropsychiatric groups, but may also enhance cognition in young healthy adults has raised concerns and debate about the safety, access, and equity in education, work, and academic settings where taking drugs for enhancement purposes is becoming increasingly widespread (1, 2). Functional magnetic resonance imaging has been used to identify residual cognitive function and conscious awareness in patients assumed to be in a vegetative state, yet who retain cognitive abilities that have evaded detection using standard clinical methods (3). Several companies offer neuromarketing and brain-based lie-detection services, which has raised concerns from the academic community at large about the use and misuse of neuroscientific results (4).

Neuroethical issues are surely going to become ever more pertinent with new developments in imaging analysis techniques, the simultaneous integration of multiple neuroimaging systems, and the linking of genetics with imaging. Although we realize that both students and lecturers are often plagued with already challenging schedules, we propose that as standard good practice, academic departments should ensure that mechanisms are in place for teaching neuroethics. A solid education in the neurosciences should encompass the ability to consider the ethical implications of one's research. Such an education will ultimately also promote future neuroscientists integrating socially relevant questions into their research and ensuring from an early stage that the public at large is supportive of advances in neuroscience.

References