

NON-INVASIVE NEUROMODULATION, VULNERABILITY AND COERCION

Jennifer A. Chandler

Faculty of Law

University of Ottawa

Three types of cases

- Three types of cases
 - Decisional incompetence (substitute decision-making)
 - Youth
 - Mental disability
 - Decisional competence (coerced consent)
 - Criminal offenders
 - Mental illness
 - Employers
 - Decisional competence (diffuse social pressure)
 - Competition (workplace, school)
 - Ideology of self-optimization and responsibility (e.g. dementia prevention)

Two case studies

Children

- **Enhancement**
 - e.g. Memory, attention and cognitive performance, motor skills, vision, decision making and problem solving, mathematical cognition, language.
 - Cohen KR, et al. 2012. The neuroethics of non-invasive brain stimulation. *Curr. Biol.* 2012; 22:R108–R111.
- **Therapeutic**
 - e.g. Stroke and cerebral palsy, epilepsy, neuropsychiatric disorders, etc.
 - Rajapakse, T and Kirton A. 2013. Non-invasive brain stimulation in children: applications and future directions. *Transl. Neurosci.* 4(2) doi:10.2478/s13380-013-0116-3.

Criminal offenders

- **Proactive aggression**
 - Dambacher F et al. 2015. Reducing proactive aggression through non-invasive brain stimulation. *Soc. Cogn. Affect. Neurosci.* 2015 Feb 12
- **Social norm compliance**
 - Ruff C, Ugazio, G, Fehr E. 2013. Changing social norm compliance with noninvasive brain stimulation. *Science* 342(6157):482-484.
- **Addiction**
 - Bellamoli E et al. 2014. rTMS in the treatment of drug addiction: an update about human studies. *Behav Neurol.* 2014:815215.

The framework for evaluation

Children

- Evaluation of the use of NIBS to enhance cognition in children.
 - The best interests of the child
- Enhancement
 - *"I took a good deal o' pains with his eddication, sir; let him run in the streets when he was very young, and shift for hisself. It's the only way to make a boy sharp, sir."*
 - Charles Dickens, *The Pickwick Papers*, 1836
 - Orthodontics, vaccination, etc.

Criminal offenders

- Ethical evaluation of rehabilitative treatment of offenders
 - Punishment or therapy?
 - Good reasons to evaluate rehabilitation within the framework applicable to therapy.
- Evaluation of the application of NIBS to rehabilitate offenders.
 - The best interests of the offender

When is change beneficial?

Children

- Is this about satisfying the expectations and desires of others?
 - Parental expectations and standards.
 - Is it in the child's best interest to satisfy the expectations and demands of parents, schools, peers, society?

Criminal offenders

- The objective of rehabilitation
 - Adoption of (or at least compliance with) important social norms.
 - But are those social norms valid?
 - Is it in an offender's interest to satisfy those norms?

The self-fulfilling prophecy of blaming the brain?

Children

- Identity, self-efficacy and the “Golem effect”
 - Baumeister et al. 2009. Prosocial benefits of feeling free: Disbelief in free will increases aggression and reduces helpfulness. *Pers. Soc. Psychol. Bull.* 35(2):260-268.

Criminal offenders

- Identity, self-efficacy and desistance
 - *R. v. Ominayak* (2007 ABQB 442)
 - “It’s not me; it’s the brain damage.”
 - “It’s not me; it’s the medication that isn’t working.”

If there is coercion, who is in control?

Children

- Parents?
 - “[I]t is sad, it really is sad. I think that we are losing some of the value of the system because of it. I would always tell my kids: ‘Do your best and I will be happy and I will be proud.’ The reality is that you have got to perform or you are not going anywhere. It is scary but it is true.”
 - Forlini C and Racine E. 2009. Autonomy and coercion in academic “cognitive enhancement” using methylphenidate: Perspectives of key stakeholders. *Neuroethics* 2:163.
 - “Other [parents] did acknowledge...that others’ parenting practices (forcing their child to use CEs) would be a concern if it began to disadvantage their own child.”
 - Ball N and Wolbring G. 2014. Cognitive enhancement: Perceptions among parents of children with disabilities. *Neuroethics* 7:345.

Criminal offenders

- Judges?
 - Recognize reduced risk after offender obtains treatment that a judge would never endorse directly?
 - State v. Brown 326 S.E.2d 410 (1985 S. Carolina Sup. Ct.)
- Physicians?
 - Refuse to provide a treatment sought by the offender?
 - Jennifer A. Chandler, “Legally-coerced consent to treatment in the criminal justice system” in Holmes, D., Perron, A. and Jacob, J.-D. (eds) *Power and the Psychiatric Apparatus: Repression, Transformation and Assistance* (Ashgate Publishing, 2014).