

**Medical neuroenhancement of mood: social and ethical
issues at the forefront of the debate**

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1. Neuro-enhancement by implantation of electrodes in and around the brain

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Abstract: Enhancing brain activity and function is a very ancient practice which is usually accomplished by taking drugs. Recently, it has become possible to modulate mood by applying magnetic (TMS) or electrical current to the brain (tDCS, implanted electrodes) or by training the brain to work at predetermined oscillations (neurofeedback). A summary of the available neuromodulation techniques will be presented associated with data from human subjects implanted with cortical and/or subcutaneous electrodes that demonstrate the potential for electrical neuro-enhancement. A hypothesis will be forwarded explaining these results and a simple methodology that can be used to prove or disprove the hypothesis. Based on the hypothesis a hint can be given of possible future applications of electrical neuro-enhancement.

2. Self-Esteem, Mood Enhancement, and Human Flourishing

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Abstract: Many psychologists view self-esteem as a fundamental human need, and its importance is emphasized in North American and European culture. Drugs like Prozac, which are believed to have mood-enhancing effects, could offer an easy way to achieve high self-esteem. Whilst some of those who are sceptical of enhancement argue that the use of drugs is an unacceptable short-cut to happiness, and that there are more valuable and satisfying ways of achieving self-esteem, there is evidence to suggest that raising self-esteem through drugs might avoid some of the personal and social problems associated with pursuing self-esteem through the more traditional route of striving for achievements. However, there is also evidence to suggest that the pursuit of self-esteem comes at significant cost to many aspects of life that are important to most people, and that the belief that self-esteem is an important component of human flourishing is mistaken. Whilst I do not claim that the use of mood-enhancing drugs is unethical, their attractiveness depends on an assumption that using them will make one's life go better. I question this assumption, and assess the contribution that we can reasonably expect them to make to our flourishing.

3. Can mood enhancement make us less happy?

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Abstract: Suppose that effective and harmless mood enhancers can be developed, e.g. in the form of drugs, and that we will, as individuals, get access to these drugs. If we assume (uncontroversially) that pleasant mood is a conceptual component of happiness, this strongly suggests that the existence of such a drug would make the world a happier place. (I'll not discuss whether it would make the world a better place as well.)

But would this really be the case? To kind out whether the skeptic is right, we need to reflect on the possible indirect effects that mood enhancers would have on happiness, e.g. How a wide-spread use of mood enhancers would affect the determinants of happiness, both on the individual and the societal levels.

I will present some results from the empirical happiness studies, namely a list of factors that have been shown to affect our average happiness levels over time, ranging from democratic participation to intimate relationships, active leisure and interpersonal trust. I will then speculate on whether it is likely that mood enhancers will affect these factors in a positive or negative way. For example, is there any risk that mood enhancers will have such negative effects on important determinants of happiness that the net effect will be negative?

4. Performance enhancing drugs and marriage: the chemicals between us

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Abstract: To help love on its way using chemical means has a long tradition, from aphrodisiacs to love potions. Today affective neuroscience is starting to approach the point where it may be possible to design drugs that intervene in the neurochemical systems of human love. Trends in divorce and findings in evolutionary psychology suggest that love might indeed need a helping hand. Would drugs to enhance pair bonding be ethically problematical? Are there differences in how different parts of the love process (lust, infatuation, lasting bonding) could ethically be enhanced? We examine the ethics of biological modification of love and human relationships.

5. Children Need Love Rather Than Pills

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Abstract: Neuroscientific studies show that a child's psychological, social, cognitive and even physical developments can be seriously hampered if the child is not loved adequately. Given recent advances in psychopharmacologicals, some people might think that children's need for love could one day be met pharmacologically. This paper offers reasons to doubt this idea.

6. Drugs and Other Therapies Looking for Good Moods – Enhancing the Individual Good or the Social Good?

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Abstract: Mood enhancement is a hot topic in scientific and ethical debates (Rothman, 1994; Kramer, 1997; Freedman, 1998; Chatterjee, 2004). The present debate provokes the idea that neuroscientists are capable of developing tools to enhance people's feelings (Elliott, 2003; President's Council on Bioethics, 2003; Cerullo, 2006). Many drugs and other chemical or physical instruments such as deep brain stimulation, which have the potential to improve people's feelings, are in development or already in clinical practice (Elliott & Chambers,

2004; Foster, 2006). Neuroscience is at the wake of producing happy souls (Kass, 2003). How should we assess the efforts of neurosciences to prevent experiential states such as apathy, pessimism, bad feelings and bad memories or to promote good feelings and good memories?

In this paper it will be shown that there are different ways of using the terms 'good' or 'bad' to play their game in mood enhancement, which are conflated in the current enhancement debate. This pluralistic approach to goodness and badness challenges the received view that there is a deep, self-evident connection between mood enhancement and its necessary goodness, whence critics and opponents self-evidently have to refer to its obvious badness. The connection between good or bad in enhancement inherently assumes an ethical stance leading to discussions whether one is responsible, has an obligation or perhaps even a duty to 'enhance'. For the same reason critics or opponents of mood enhancement have to take over this black and white picture and therefore have to stress that there is something intrinsically moral wrong with mood enhancement (in terms of authenticity, identity or other 'deep' threats to humanity).

In this paper, however, I want to address this issue from a collective and communal perspective. What does it mean to say that certain moods are good or bad for the community, that they are threatening the community, that by stimulating or prohibiting particular moods the community will be 'better off'? What does it mean to say 'better off' anyway? In order to answer these questions an analysis of certain core arguments is imperative.

Two arguments will be elaborated. The first is that in stating that there is something 'good for the community', in fact, in many if not in all cases the community argument is used in terms of intra-group or inter-group relationships. If this is correct, then a differentiated evaluative scheme of mood enhancement is required. The second is whether it is necessary to use the community argument, that is to say, whether one can refer in specific ways to the 'good' or 'bad' of the community without using an aggregative calculus. The common, utilitarian approach implies judging which kind of habits or behaviours, in this case certain experiential states of its members (or groups of members) make society or the community 'better off', which means the counting of the positive and negative consequences for its members and in the end summing up to the point that one can aggregate the different utilities into a final score. There are actually other ways of doing the same procedure. Thus, I will use in this paper the contractualist reasoning that it is about deciding which principles or rules make society or the community 'better off'. It is not my aim to claim that the contractualist approach is decisive, but I want to show that there are other ways of using the community argument than the utilitarian approach and, simultaneously, albeit in a modest way, to show that this might better fit the social ways of judging habits and behaviour as good or bad.

7. The dynamics of the treatment-enhancement distinction: ADHD as a case study

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Abstract: A central issue in the ethical debate on psychopharmacological enhancers concerns the distinction between therapy and enhancement. Although from a theoretical point of view it is difficult to make a clear-cut distinction between treatment (of disease) on the one hand, and enhancement (of normal functioning) on the other, in medical practice and policy debate the counter-positioning of therapy to enhancement is clearly at work. Especially, pharmaceutical companies have an interest in creating new diseases to sell new treatments; they have an interest in occupying the 'grey area' between normal and abnormal, treatment and enhancement.

In this paper I will discuss the dynamic of the treatment-enhancement distinction, and argue that practices that could be labelled 'enhancement' can also be understood in terms of

medicalization and 'disease mongering'. The argument is supported by results from a qualitative empirical study into the experiences and opinions of adults diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). With regard to the therapy-enhancement distinction, I will show that patients are ambivalent about how to understand ADHD: as a disease, a disorder or a normal variation. Intervention with psychopharmacological means can also be understood in different ways. From an insider perspective the treatment of ADHD is conceived as a 'normalising' of functioning, whereas from an outsider perspective it can be understood as medicalisation of underperformance, or indeed as performance enhancement.

8. A critical note on fast and easy ways to happiness. The relevance of effort

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Abstract: In this paper I will discuss the thesis that effort and skills are important ingredients for achieving happiness. The relevance of individual effort for happiness was elaborated by economist Tibor Scitovsky and by psychologist Mihalyi Csikszentmihalyi. In his critical analysis of comfort and luxury Scitovsky poses that a strong focus on comfort undermines more traditional sources of pleasure because it induces a reduction of the effort and skills necessary to enjoy these sources. This thesis can be complemented by the flow model of Csikszentmihalyi. The notion of flow refers to experiences of absorption in an activity that require a certain effort and skill that is in balance with the offered challenge. Research shows that these experiences have a considerable positive effect on happiness and the general life quality. This literature points out the relevance of effort for happiness. I will discuss the objections this poses for instant forms of mood enhancement made possible by new technological evolutions in the medical world.