

Can Kant's Position Be Guessed in a Debate on Access to New Technical Advances in Medicine?

Daniela Reisz,¹ Alexandra Anghel²

¹ Victor Babes University of Medicine and Pharmacy, Timisoara, Romania

² Neurology, SCJUT, Romania

Abstract

Neuro-ethics arises as a new field of debate in bioethics, respectively in medical ethics. The term was coined by Safire in 2002 and covers aspects linked to fundamental value questions such as what is life, when does life start, when does an embryo become human. Other subjects include questions on what the mind is; the self and the psyche; brain research; consent; brain as a source of ethics; wellbeing; eugenics; the relationship between new technologies and humans. Several pillars sustain the common theoretical background of all of these ethical enquiries. One of them is the philosophy of Immanuel Kant. MRI (Magnetic Resonance Imaging) is a fascinating tool for diagnosis but it cannot substitute the specific activity of the doctors. Even so, from the beginning, the request for MRI investigation surpassed its availability and led to the enforcement of access criteria. Who will benefit from the new technology and who will not? Sometimes the information supplied by MRI can make the difference between life and death or disability, and the selection of beneficiaries requires a strong ethical ground. The question we are trying to answer is: what would Immanuel Kant's position be in this debate?

Keywords

MRI; prevention; neuro-ethics; human ideal; prevention.

Can Kant's Position Be Guessed in a Debate on Access to New Technical Advances in Medicine?

Daniela Reisz,¹ Alexandra Anghel²

¹ Victor Babes University of Medicine and Pharmacy, Timisoara, Romania

²Neurology, SCJUT, Romania

Abstract

Neuro-ethics arises as a new field of debate in bioethics, respectively in medical ethics. The term was coined by Safire in 2002 and covers aspects linked to fundamental value questions such as what is life, when does life start, when does an embryo become human. Other subjects include questions on what the mind is; the self and the psyche; brain research; consent; brain as a source of ethics; wellbeing; eugenics; the relationship between new technologies and humans. Several pillars sustain the common theoretical background of all of these ethical enquiries. One of them is the philosophy of Immanuel Kant. MRI (Magnetic Resonance Imaging) is a fascinating tool for diagnosis but it cannot substitute the specific activity of the doctors. Even so, from the beginning, the request for MRI investigation surpassed its availability and led to the enforcement of access criteria. Who will benefit from the new technology and who will not? Sometimes the information supplied by MRI can make the difference between life and death or disability, and the selection of beneficiaries requires a strong ethical ground. The question we are trying to answer is: what would Immanuel Kant's position be in this debate?

Keywords

MRI; prevention; neuro-ethics; human ideal; prevention.

I. Premises

According to Clausen and Levy's Handbook of Neuroethics, "neuroethics is systematic and informed reflection on and

interpretation of neuroscience, and related sciences of the mind (psychology in all its many forms, psychiatry, artificial intelligence, and so on), in order to understand its implications for human self-understanding and the perils and prospects of its applications” [1] (p. vi). Among the large array of methods, techniques, and devices which contribute to the development of neuroscience and are fundamental in acquiring knowledge in neuroscience, MRI and functional MRI (fMRI) have an important place. This technology is relatively new and fast developing.

When new technology appears in medicine, the ethical issues it raised require resolution. The actual discussion on imagistic neuro-ethics refers especially to the application of functional MRI as a useful tool to study the human brain, behaviour, and cognition. Functional MRI is used for research purposes and therefore neuro-ethics debates mainly on this issue. These discussions are comprised of several issues: the accidental discovery of abnormalities which causes misinterpretations with important consequences on the subject; the ability to determine the level of consciousness in people with severe brain injury; lie detection; the attempts of mind reading in relation to privacy; the attempts to identify associated patterns with behavioural disorders and with the potential to predict future illness [2] (p. 661).

Brain and spinal cord MRI have revolutionized diagnosis and the description of diseases and thus have a relatively large impact on the quality of medical services. The high technological level, costly research, the interests of the industry and its intervention in research and development resulted in the promotion of this diagnostic tool to the public. Although until the last century, medical inventions were generally reserved for doctors and medical staff, nowadays large groups of researchers from different fields are involved in the development and production of new medical technologies. This changes the medical ethical codes (which used to belong to doctors) used for promoting technical devices and thus generate a field of advertising ethics in medicine.

Traditionally, medical advertising was considered unethical. Today, old medical codes are overcome by the industry and are subjected to new paradigms. The Pharma industry in Europe does not have permission to advertise directly to patients and to promote therapeutic solutions, but it does have permission to do so in the United States.

Depending on the regulations in use, various marketing policies exist for different Pharma actors. These differences in advertising and marketing do not operate for the new technologies and are intensely marketed directly to the public. The advertising of the new technological means has a double purpose: on the one hand, to identify potential investors for research development and, on the other hand, to identify new users and beneficiaries and create a market. The market has regulatory mechanisms through demand and supply.

Information on new technologies touch the public in various forms, while it sometimes bypasses doctors. As a result of this advertising, potential beneficiaries appear with a desire to access the new technology. Of course, new technologies bring solutions for real needs, but the marketing process generates additional needs, thus increasing the demand for a service and implicitly widening the market. Public access to new technology in medicine generates new and unexpected problems for the medical system and staff, as well as for the subject per se.

The ethics of neuroscience and the neuroscience of ethics (definition of neuro-ethics according to Adina Roskies [3] (p. 21) deals especially with good regulatory practices at institutional level, not with the individual ethical approach necessary in situations of moral relevance. Although it discusses the ethics of advertising in medicine, this essay focuses on individual approaches to new technologies and hence the relationship with Kant's ethics, utilitarian ethics, and liberalism.

II. Method

This study will address the implications of free public access to MRI with reference to traditional ethical values and from an individual perspective. Using some examples from medical practice, the benefits and shortcomings of excessive neuroimaging will be discussed. We will discuss the human reactions facing the perspective of the disease from an epistemological perspective. Humans facing illness is not be examined, but we will assert the psychosomatic pathology, as this is the great consumer of futile medical services.

Publicity makes new technology attractive. New technology thus becomes desirable (and eventually a luxury). The public who has the material resources to use new technology will do so to the detriment of

those who genuinely need it but cannot afford it. In countries such as Romania, MRI devices are owned by both the public health system and by the private system. People who do not genuinely need MRI examinations put pressure on both systems and thus shorten the availability of this examination. Nevertheless, it is also possible that this desire for MRI investigations is a socio-cultural determinate and is specific to the Romanian population. The roots of this attitude are very complex and require a deep and complex analysis. They are linked to the medical system as before and after 1989 Revolution, the politics involved in the management of the medical system, the partial privatisation of medical services, mass media images of doctors and the medical system, general mistrust, and so on. Nevertheless, the reason for the increasing demand of MRIs as unrelated to the medical condition is connected to several human characteristics: the need for knowledge/curiosity, the need for explanation/causal relationship, the reference to a perfect human/ideal, the need for power/control of destiny and the continuous change in conceptions about the quality of life and good health.

A. The need for knowledge /curiosity

According to Kant, “human reason has the peculiar fate in one species of its cognitions that it is burdened with questions which it cannot dismiss, since they are given to it as problems by the nature of reason itself, but which it also cannot answer, since they transcend every capacity of human reason” [4] (p. 2343).

The patients’ need for knowledge is consistent with biologically-specific features. Knowledge/curiosity is a biological attribute in large primates. Monkeys give up eating to satisfy their curiosity. So, the desire for knowledge is an intrinsic part of the human condition.

Knowledge is validated as a value in many philosophical systems. From the Kantian point of view, knowledge is supposed to be good and desirable. “The charm in expanding one’s cognitions is so great that one can be stopped in one’s progress only by bumping into a clear contradiction” [4] (p. 3339).

We will discuss, using a few examples, the consequences of blindly pursuing the need for knowledge in medical practice. Example 1. A young female patient with known migraine attacks is Angio-MRI examined and the main finding is a small-sized intracranial aneurysm.

The intracranial aneurysm is the main cause (80%) for sub-arachnoidian haemorrhage (SAH), a very serious condition with a high mortality rate (about 40%) [5]. If the aneurysm ruptures, its devastating consequences are difficult to control. But not all intracranial aneurysms break. In a normal population, the prevalence of intracranial aneurysms (IAs) is estimated to around 2% to 3.5% [6]. Our patient, finding about her intracranial aneurysm, starts to correlate her migraine with this vascular abnormality and infers that she has, apart from the migraine, a serious disease. Currently, technological advancement allows the obstruction of this vascular malformation by coiling or stent application. Endovascular techniques prevent aneurismal rupture, but a few years ago, the only solution to prevent the aneurysm rupture was craniectomy and clipping. In the past, patients, otherwise healthy, were subjected to brain surgery with the purpose of removing a potential risk with a low probability. The SAH incidence is 10 per 100 000 person-years, implying that many IAs never rupture [6]. Today, such a patient has several options: clipping the aneurism (a very complicated procedure, with increased risks in itself), coiling or stenting of the aneurysm (expensive, available just in specialized centres), or keeping it as it is. In small aneurysms, doctors prefer to do nothing because of the bigger risk of the procedure compared to the risk of the rupture. If not operated, the patient will live anxiously with the concern of a possible aneurysm rupture. Therefore this discovery affects the patient for life through emotional and material impact or through the secondary effect of medical interventions. As doctors, we ask ourselves: was it useful? Does MRI, in this situation, contribute to the well-being of the subject?

B. The need for an explanation/ causal relationship

Causal relationship is an *a priori* form of intuition in human knowledge. "...I really connect two perceptions in time. Now, connection is not the work of mere sense and intuition, but is here rather the product of a synthetic faculty of the imagination, which determines inner sense with regard to temporal relations. ...and that is here the concept of the relation of cause and effect [4] (p.7307).

Because of this hardwired form of intuition, people are prone to establish a causal relationship between successive events. When such a relationship cannot be easily established, people are anxiously looking

for one and they need an explanation for indeterministic events, even if the explanations are useless.

Example 2. A patient with minor neurological complains asks for an MRI examination because he had a head trauma many years ago. He wants to know if the head trauma is the cause of his actual distress. This particular patient does not look for a treatment, but he wants to know: maybe it is the old head trauma which starts to manifest. The effort is futile. The trauma is not reversible. We cannot change the patient history and acknowledging a possible link between the events has no actual utility. Sometimes, the need for knowing the reason of a disturbance is just speculative metaphysics, and useless from a pragmatic point of view. It is an attempt to break the *noumenal* realm.

We observe a need for knowledge in a field where knowledge is not always possible. Subjects pretend access to the reality itself. But the essence of speculative metaphysics is to transcend experience entirely in order to achieve the knowledge of the noumenal realm. Here, the faculty of reason is the only relevant one, but its most crucial speculative conclusions, its deepest convictions about the self, the world, and god, are all drawn illegitimately. Rational knowledge has access to the world of phenomena, not to reality itself. “For we have to do only with our representations; how things in themselves may be (without regard to representations through which they affect us) is entirely beyond our cognitive sphere” [4] (p.7332).

In his *Critique of Pure Reason*, Kant identifies space and time as *a priori* intuitions within which phenomenological manifestations of reality are modulated. Phenomena are the appearances which constitute our experience; noumena are the (presumed) things themselves, which constitute reality. All our synthetic *a priori* judgments apply only to the *phenomenal* realm, not the *noumenal* [7]. Kant considers it impossible to know the thing in itself, the noumenal realm. We can only know the manifestations, the appearances of reality, the phenomenal realm. Due to this limitation of reason, the access to the integral knowledge of the thing in itself is denied. The lack of access of reason to the noumenal realm leads to the fact that the speculations on God or essence or life, or sickness, are sterile as well as any other pretence of absolute knowledge. Even if inaccessible in its essence, reality exercised an irresistible fascination for the rational being and is a permanent subject of speculations. Men are incapable of believing that the world is not

knowable in its essence. According to Kant, the thing in itself exists and leaves a set of traces that we can identify. We can thus infer certain characteristics, but further speculations are untenable.

C. *The human ideal*

Immanuel Kant proposes the existence of God as a necessity derived from moral imperative. Humans need an ideal to which any human should relate. Rational beings must act by Principle and this principle is identifiable with universal law. "Always act according to that maxim that you can will as a universal law of nature" [8]. Kant believed in the teleological evolution of morality and in inevitable historical evolution to reach a sublime. Kant considered and believed that this evolution is the duty of people.

Perfect body, skin, hair, nails, teeth, are part of today's propaganda. We are approaching the human ideal every day. We have the feeling of power and perfection. We are making changes in values, behaviour, consciousness. In this very demanding environment, a deviation from normal/ideal becomes suffering in itself.

Example 3. A man in the fourth decade of life, healthy, with good professional results, goes through stressful events which combine various professional and family threats. In response to these psychic tensions, he develops psychosomatic manifestations such as palpitations, dizziness, headaches, insomnia, malaise, the feeling of imminent death, the feeling that something is wrong – a burnout syndrome. The idea of an abnormality thus appears, and the human omnipotence is denied. He addresses a doctor. He goes through a laborious medical check-up where, even if doctors assure him of his healthiness, he denies it. Insisting, his complains are considered as potential signs of organic disease and he is directed to a cerebral MRI. A few small demyelinating lesions with no actual pathological significance are observed.

The patient reads the result and starts to study on the internet typing *demyelinating lesions*. He finds out that these occur in multiple sclerosis and this is a serious and disabling disease. Suddenly, his life changes and the prospect of suffering and disability inflicts on his psyche. The patient will live with the belief that he has a serious, yet hidden illness. The uncertainty of the diagnosis for an important period of time is a very stressful experience. Those psychological experiences (fear,

depression, anxiety, obsessive claims and preoccupations) will affect others besides him. Physicians can feed this anxiety by subjecting the patient to further exploration. A lumbar puncture for dosing oligoclonal bands, measurements of potentially evoked signals (PEV), or even a longitudinal observation are stressful events. All of these interventions perpetuate long-term fears.

Of course, there is a trend to become perfect, even God-like. People with high self-esteem long cultivated by entourage develop adjusting disorders when they discover that they are not perfect and are not so close to the ideal as they use to think they are.

Achieving technological performance, mastering nature and controlling it, makes the relationship with divinity implicitly assumed and human beings feel the omnipotent master. Once the feeling of the person's invincibility has been contradicted (with minor evidence), there is a fierce battle with evidence that adds an additional moral disorder to the objective medical.

D. The need for power /control of destiny

Example 4. A young female with cervical headaches asks for a brain MRI because her grandmother has had a stroke in her seventies. The patient wants to know the cause of her headaches, in order to prevent a stroke and she wants to start early investigations to make sure it is not too late. The *a priori* intuition of causality, tends to be present in any cognitive process. As a result of this pre-set feature of our mind, there is an internal need for people to establish causal links between consecutive events. Once a symptom appears, it must be related to a cause, and to reverse that symptom, the cause must be removed. This simple thinking based on rudimentary logic is the engine for the need to know and the need to have an MRI examination as a source of knowing causality. The patients are looking for the cause of their suffering in order to remove it and to prevent greater suffering. By doing this, they feel in control of their own destiny.

People need to control their destiny in order to avoid unwanted consequences. Subsequently, prevention has become a propaganda priority in battles with unseen evil; unseen and eventually inexistent/small probability evil. Prevention is a term widely used in the media and internalized as an absolute value in the population. Better prevent than heal – is one of the constantly used slogans. The debate

on vaccination is one example where an absurd militancy against vaccination manifests, because of minor (from a statistical point of view) negative effects. At the same time, vaccination is an example of how we try to avoid any of the small perils of life.

The principles that “prevention is always good” bring to mind the distinction between maxims and moral law. “Prevention is always good” is mainly a rational practical percept because the foundation of this percept is happiness, self-love and presupposes an object of pleasure or pain. “Now the moral law, which alone is truly objective (namely, in every respect), entirely excludes the influence of self-love on the supreme practical principle, and indefinitely checks the self-conceit that prescribes the subjective conditions of the former as laws” [9] (p. 1318).

III. Conclusions

Immanuel Kant notes that the only unconditionally good thing in the world, according to common understanding, is a good will. Good fortune, health, and even happiness as broadly understood are not unconditionally good, because when coupled with a bad will they become a source of condemnation for an impartial spectator [10].

Emerging knowledge from access to new technologies could have perverse effects that cannot be predicted. Sometimes unnecessary and abusive explorations create an iatrogenic pathology that impacts people’s quality of life. With new technologies, brain abnormalities can be identified and treated as real diseases despite the fact there are no signs or symptoms. Medical solutions to solve brain abnormalities could have serious harmful long-term effects. We ask ourselves: is it useful to know that we have hidden genetic defects, with or without impact on our health, even if this reality cannot be changed? How does the inner or outer universe change once we get this information? Do people remain the same if they face the stigma? Must a person with a known genetic defect announce this to protect society from spreading that genetic defect?

Philosophical-religious traditions pay attention to the power of truth on unprepared persons. The knowledge/the truth is harmful if the one who discovers it does not go through an initiatory journey. Finding the truth is good just in case we have the means to cope with it.

Access to information provided by new technologies can be a source of great anxiety for those who receive them. They have to go through a long and laborious process to harmonize with the revealed truth or with the non-existence of a truth. If it is a detectable truth, nowadays access to this truth is relatively easy – but coping with the truth is another problem.

The casual discovery of certain particularities, or small defects of the human body, that offer individuality to the person, rise several problems to the medical team. There is an explicit or implicit discussion if we consider these particularities as a disease-producing potential, and we will take important steps to remedy them, or we will accept the idea of imperfection in an abstract and profound plan.

Preventing a bad thing involves considering the short, medium, or long-term effects of a present action. Prevention is more of a utilitarian value. It implies taking current measures to neutralize a long-term bad potential. Often, this prevention is done regardless of the small probability of the occurrence of the bad event and sometimes independent of the magnitude of the prevented event. A negative event deserves prevention even if it is infrequent or requires a large amount of effort.

An important aspect to discuss related to prevention is the principle of freedom. Preventive measures taken excessively challenge liberal values, constrain citizens to gestures imposed by the system in the name of an obscure good. Prevention, by its cumulative effect, ultimately restricts individual freedom and most often proves to be an unnecessary ritual. This raises the question of whether prevention is an absolute or relative value, and where is the demarcation limit that transforms prevention from a general good into a general bad.

“...That the only purpose for which power can be rightfully exercised over any member of a civilised community, against his will, is to prevent harm to others.” (John Stuart Mill. *On Liberty*) [11] (p. 166). Stuart Mill refers to an actual harm, of objective physical nature and not to someone’s feelings of hurt or someone’s offended value systems.

By reducing to absurdity: would we rather not be born in order to prevent suffering, sickness and death? Death is the absolute fundamental bad.

Playing with ideas is a general human compulsion and we cannot preclude our patients to do so. Our duty is to answer all questions that

arise regardless of the side effects of knowledge on the patients. Even if we recognize the futility of the search for inexistent answers by a patient, we must assist him during this process. The MRI does not give all the answers to our angst, but can be a step forward. Coping with consequences is a different process.

The *rational being* has a duty to pursue the *moral imperative*. Doing this, the *rational being* has the chance of liberty, the chance to avoid universal physical laws that forces us in the deterministic path, as simple parts in a complex mechanism. To have at least the sensation of liberty we must consent that we and our patients have the freedom of choice, even if the result is occasionally unwanted. Utilitarian principles, although very appealing, easy to contextualize, could have side effects and when an ethical travail arises, the Kantian view must be the larger framework of the analytic process.

“Each is the proper guardian of his own health, whether bodily, or mental and spiritual” [11].

References

- [1] J. Clausen, N. Levy, “What is Neuroethics?”, *Handbook of neuroethics*, J. Clausen, N. Levy, Heidelberg: Springer Reference, pp. V-VII, 2015.
- [2] A. L. Roskies, “Neuroimaging Neuroethics: Introduction,” *Handbook of Neuroethics*, J. Clausen, N. Levy, eds., Dordrecht: Springer Reference, pp. 659-663, 2015.
- [3] A. Roskies, “Neuroethics for the New Millenium,” *Neuron*, vol. 35, pp. 21–23, July 3, 2002, Cell Press.
- [4] I. Kant, *Critique of Pure Reason* (The Cambridge Edition of the Works of Immanuel Kant). Cambridge: Cambridge University Press. Kindle Edition, 2009.
- [5] R. C. Zebian, A. Kazzi, “Emergent Management of Subarachnoid Hemorrhage,”
<https://emedicine.medscape.com/article/794076-overview> Accessed: June 10th, 2018.
- [6] T. Skodvin, L. H. Johnsen, O. Gjertsen, J. G. Isaksen, A. Sorteberg, “Cerebral Aneurysm Morphology Before and After Rupture: Nationwide Case Series of 29 Aneurysms,” *Stroke*, vol. 48, no. 4, pp. 880-886, 2017.
Available at
https://www.ahajournals.org/doi/full/10.1161/STROKEAHA.116.015288?url_ver=Z39.88-

- 2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%3dpubmed. Accessed: Mai 6th, 2018.
- [7] G. Kemerling, "Kant: Experience and Reality," *Philosophy Pages*, 2011. <http://www.philosophypages.com/hy/5g.htm>. Accessed: May 6th, 2018.
- [8] C. M. Korsgaard, "Kant's Formula of Universal Law," *Pacific Philosophical Quarterly*, vol 66, no. 1-2, pp. 24-47, 1985. <http://nrs.harvard.edu/urn-3:HUL.InstRepos:3201869>. Accessed: April 24th, 2018.
- [9] I. Kant, *The Critique of Practical Reason*. University of Adelaide, 2014. Kindle Edition. <http://ebooks.adelaide.edu.au/k/kant/Immanuel/k16pra/index.html>.
- [10] J. Sorens, "Immanuel Kant: Philosopher of Freedom," *Learn Liberty*, 2017. <https://www.learnliberty.org/blog/immanuel-kant-philosopher-of-freedom/>. Accessed April 24th, 2018.
- [11] J. S. Mill, *On liberty and the subjection of women*, New York: Henry Holt and Co. Kindle Edition, 1979.