



Research paper

The medicalization of ethics or ethicalization of neuroscience: Toward a conceptual re-examination

Hamidreza Namazi^{a, b}, Saba Mirikermanshahi^{c, *}^a Department of Medical Ethics, School of Medicine, Medical Ethics and History of Medicine Research Center, Tehran University of Medical Science, Tehran, Iran^b USERN KUMS Office, Kermanshah University of Medical Science, Iran^c School of Medicine, Kermanshah University of Medical Science, Kermanshah, Iran

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ABSTRACT

Thinking With a growing body of brain science, the research and technological interventions in neuroscience have led to the rise of some ethical, moral, legal, conceptual, and socioeconomic problems. These problems and the need to establish an intellectual framework to approach them framed the base of Neuroethics. Most conveniently, the normative definition of Neuroethics is declared as ethics of neuroscience and neuroscience of ethics. However, there are more critical issues to define and frame the conceptual structure of the field. The current naturalist-positivist vision in neuroscience will extend the concept that human behavior, such as decision-making, consciousness, character, and moral intuitions, are mechanical features of a machine. Arguments from philosophical and anthropological views arose around this definition, focusing on the reductionist nature of merely a positive view of the human mind and behavior. Thinking through the pearls of such an approach and what would be at stake if we fail to recognize the importance of the philosophical-anthropological aspect of neuroscience, we first review different definitions and critics of the field, then proceed to discuss two concepts of Ethicalization and Medicalization. These concepts clearly show the established positivist-naturalist view in bioethics and the issues it caused. To better understand these two concepts, we use existing discussions and literature around them in bioethics. By reviewing the existing literature and adding a philosophical view of the field, we aim to add a new approach to the field of Neuroethics. We focus on adopting an interdisciplinary approach to Neuroethics to provide the needed background vision and theory to discuss interdisciplinary issues and enable scholars and theorists to reframe the fundamental issues of the field, such as the nature and scope of Neuroethics.

Introduction

After its first appearance in the 1950 s, Medicalization has become a repeatedly used word in the current culture of medical humanities studies. However, it might be novel to you that one of the earliest examples of Medicalization could be found in the works of Abu Bakr Muhammad Ibn Zakariya Al Razi (865–925 CE, 251–313 AH). He is mainly known as a physician whom his books have been translated into Latin during middle ages and dramatically effected medicine in Europe and remained used in medical school for quite long time. Nevertheless, even today, he is a controversial philosopher as well. Al-Razi gave thought to moral philosophy and wrote "al-Tibb al-Ruhd" (Spiritual Physic). In this book he emphasized on the evil qualities and vices of the soul and their diagnosis (Mohaghegh, 1967). His theory of spiritual

medicine (physics) indicates that things like jealousy should be considered and treated as a disease.

Spiritual medicine theory is a remarkable vision for turning a non-medical issue into a medical one, specifically, an ethical issue into a medical one. Now, one can see why this author began with this example. The aim of this article is first to explore the notion of Medicalization and how it could be relevant to Ethics and Bioethics. Our issue is to argue whether it is possible to medicalize Bioethics and how Neuroethics could be understood as related to Bioethics.

If we intend to describe Ethicalization in relation to the philosophy of medicine and bioethics, the description would be "problems in the field of philosophy of medicine in any area other than ethics authorized as ethical ones. In short, the process of turning non-ethical issues into ethical ones". We are interested in inspecting the examples of

* Corresponding author.

E-mail address: Saba.miri.k@gmail.com (S. Mirikermanshahi).<https://doi.org/10.1016/j.ibneur.2024.04.004>

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Ethicalization and its possible impact on neuroscience and, consequently, on Neuroethics.

In conclusion, we aim to investigate and rethink two notions of Medicalization and Ethicalization in Neuroethics to provide a vision and point directly to considering and studying these issues and the perils which remain in negligence. We first explore the meaning and background of Medicalization in general, and then we proceed to Ethicalization in the philosophy of medicine. Finally, we share thoughts on the potential effect of these two concepts in Neuroethics.

Medicalization: towards understanding

Given the basic definition of Medicalization as "the process by which non-medical problems become defined and treated as medical problems often requiring medical treatment," (Conrad and Bergey, 2015) it includes a vast range of issues and problems, from the social, political, economic, pharmacological and health-related ones to ethical concepts (Kaczmarek, 2019). As mentioned above, Razi's "Spiritual Physic" could be understood as an early example of turning an ethical concept into a medical one and trying to engage with it through medical thinking.

The word's "Medicalization" in scientific texts traces back to Thomas Szasz and Barbara Wootton's works in the 1950 s. They claim to criticize the scope of psychiatry for expanding and swallowing things like dysfunctional behavior, crime, and delinquency. They have pointed to the fact that science was gradually taking the role of morality and drawing the line between mentally ill and dysfunctional behavior (Szasz, 1958; SZASZ, 1958; Szasz, 1960; Wootton and Miller, 1959). Ivan Illich, identified as a historian-philosopher, in his influential work *Limits to Medicine: Medical Nemesis* 1975, focused on the concept of "iatrogenesis," meaning "originating from a physician/-treatment." According to Illich, turning normal processes like death and aging into medical ones is a "threat to health" imposed by clinical, social, and cultural "iatrogenesis." We can face and handle such issues as normal life processes (Metzl and Herzig, 2007; Illich, 1975). Illich's idea is that the attitude of ever more medicalizing non-medical issues will transform society and the system to be changed and transformed towards a new situation, like the way the decision for faster public transportation has formed the transportation system. In other words, when one picks a vision of life, death, or any different concept, one takes a whole set of meanings and mechanisms, pushing society to adjust to that vision. In his eyes, cultural iatrogenesis was the most dangerous because of its ability to change what it means to be human (Illich, 1975).

One of Illich's examples of social iatrogenesis, is intolerance in the face of psychological sadness or discomfort, which leads to the expansion and increase of diagnoses of depression and mood disorders (Busfield, 2008). Medicalization in psychiatry, alongside many other fields, has reached not only pathologizing grief or sadness but also coming close to medicalizing the human condition in different circumstances like losing loved ones, anxiety, and nervousness (Chodoff, 2002). If we start to see more human aspects in medicalized-objective ways, no room will be left for our subjectivity. Who we are if we see ourselves as more of an object with treatable features than a human with feelings and variations. As time passes, the populations will grow intolerant in the face of what they used to consider as normal human feelings.

Medicalization: rethinking neuroethics

Although this is not the case in this article to make arguments on the value-ladenness of Medicalization, sociologists believe Medicalization to be value-neutral. However, Erik Parens, in his essay "Good and Bad Forms of Medicalization," stands for, in his words, "attempting to distinguish between good and bad forms of medicalization" in bioethics. He refers to Conrad's distinctions between over-medicalization and Medicalization. Throughout the history of human existence, sadness in the face of losing loved ones has been considered to be a normal reaction. However, now we are facing criteria that try to describe average

cut-offs for the feeling of grief, which certainly will pathologize any outgrowing that cut-off. One should consider who we are becoming by setting medical limitations and frameworks for our feelings and how we comprehend and react to the world.

Speaking of Medicalization, the first thing that comes to our minds is the economic cost and expansion of new diagnoses and newly diagnosed people and their burden on governments, politics, and insurance and how it can affect the global health system on a large scale (Illich, 1975). Given the limited resources and severe cases in many countries, who and how will pay to rectify the situation? How new non-medical problems becoming swallowed in the medical system will lead to the emergence of new drugs and pharmacological lines and companies. However, we have a lesser epistemological view of this. The thing is, what is going to take as normal and what as pathological? What behavior, mood, or thought shall be understood as normal? And how our understanding of the human state will change if our expectation of normal human behavior is medically transformed.

Davis, J.E has categorized Medicalization into four categories: Deviant behavior like alcoholism, natural life processes like pregnancy, everyday problems of living like sadness and anxiety, and enhancement in health like cosmetic surgeries (Davis, 2010). Medicalization of ethics could be understood as related to all four, but it seems closer to the first since it plays a role in turning a crime or a sin into a treatable condition. The question worth noticing here is how this process can affect how we define ethics. In other words, do we medicalize the concepts while trying to define ethics?

What does all of this have to do with Neuroethics? The idea here is that "Neuroethics" has a significant potential for medicalizing ethics. Since we begin to see humans as "neural-man" and all human behavior and thoughts as "brain-based," we are paving the way towards dragging every single aspect of human behavior into the realm of medicine and disease, or better to put it, the realm of medical thinking. When every aspect of human life lean towards medicine, morality will be no exception. Now, it becomes crystal clear what it means when we say Neuroethics could be medicalizing ethics, because it creates potential for medicalizing morality and ethics.

Here we focus on the necessity of philosophical and epistemological inquiries in Neuroethics. Without a definition and intellectual effort aiming to draw the aim and scope of the area and figuring out the future of embedded ways of thinking, there will always be the threat of misunderstanding and counter-production. It is not about making statements about good and bad Medicalization; that must be another issue to work on. It is about noting that what has happened in the history of modern medicine still has aspects to learn from.

Neuroethics; towards re-examination

Peter Jedlicka, in his article, *Neuroethics, reductionism, and dualism*, points to this question: "Is neuroscience on the road to showing that character, consciousness, and sense of spirituality are no more than 'features of the machine?'" (Jedlicka, 2005) he continues: "Importantly, the question of our individuality and free will is a metaphysical problem, a problem that goes beyond (meta) physics. Suppose a neuroscientist says we are nothing but 'a pack of neurons'; he ceases to talk as an empirical scientist. He begins to talk as a philosopher (though sometimes not being aware of it)". He acknowledges that reductionism on some level serves to simplify complex issues and make them understandable and eventually approachable, but "strong reductionism," would lead to misconception and misunderstanding concepts such as self and consciousness.

When half of the 20th (Figuroa, 2016) century passed, the field of bioethics expanded and spread with ever-growing speed and force; bioethics had represented itself "as a new discipline....combines biological knowledge with knowledge of the systems of human values" (Potter, 1970), and its aim to understand human illnesses in both biological and human values. In doing so, bioethics had expanded enough

to reach out to the fields of law, economy, philosophy, and politics. After gene editing came to the table and GenEthics became known in the 1970 s, the revolution of neuroscience and the burst of Neuroethics in 2002 were other challenges in bioethics. In 2002, William Safire claimed that Neuroethics had been born. It is characterized as "the study of ethical, legal and social questions that emerge when scientific discoveries about the brain led to medical practices, legal interpretations and health and social policies" (Safire, 2002).

Neuroethics could be categorized into applied and fundamental Neuroethics. Applied Neuroethics, also known as ethics of neuroscience, discusses moral and ethical issues around neuroscientific research and interventions. Projects like brain-based enhancement, Brain Imaging technologies, the so-called "Brainotyping," and issues related to autonomy and privacy are only a few examples (Farah, 2005). Fundamental Neuroethics, known as the neuroscience of ethics, aims to understand the neural base of human morality and raises questions about the neural bases of human behavior. For example, how our individuality or psychological problems correlate to our brain function (Farah, 2005). In doing so, fundamental neuroethics deals with concepts like mind-body relationships, aporia, determinism-freedom, self-identity, free will, decision-making, and the nature of morality. This viewpoint has roots in the idea that we can grasp the truth of human beings in neurons, which has the same root as the "style of thought" of contemporary biomedicine. It considers life at the molecular level as a group of intelligible vital mechanisms that can be identified, isolated, manipulated, mobilized, and recombined in intervention practices.

Stephen Morse claims that over-focusing on what we can learn from fMRIs and neuroscientific facts to judge crimes and punishments might make us neglect the legal assumption that "people are conscious, intentional and potentially rational agents," which makes them responsible for their decisions and behavior (Morse, 2006; Hughes, 2006). Concepts like "the ethical brain" or "the empathic brain" promote the naturalistic-experimentalist vision of existence, which explains the world through measurable, objectified quantities. Reducing human feelings and behavior into neurotransmitters and discharging neurons is a way to make everything about humanity tangible. The question is, what would be at stake if we aim to see humans as "neuronal man"? (LeDoux, 2003; Gazzaniga, 2005; Churchland, 2011)

We aim to focus on the Medicalization of neuroscience and Neuroethics. In other words, it drags neuroscience and the concept of ethics into medical thinking and turns it into a medical issue. At first, what would be wrong about dealing with human issues more broadly and using medical science and point of view to understand better and approach such issues? Such questioner seems to have failed in grasping the main point, which is to consider and fully understand the process of changing concepts and how it affects the logic of the era, and how this transformation might lead to counter-products and eventually do and go against what was intended at the first place.

To better understand this claim, we could take a look at the history of psychiatric disorders and the Medicalization of ethics. With close attention, we can see that moral sins have become mental illnesses over the last few centuries. Things like addiction or uncommon sexual orientations started to be treated like diseases and find their way from ethics into psychiatry, to be seen in a new light and with new meaning that the society and the response to it become culturally different in different times. In other words, ethical issues had become medically objectified. In the following decades, as we all know, the perspective for such conditions has been processed to be normal variations, which is another medically interpreted condition because it is primarily based on usual and pathological concepts. We do not aim to get into a discussion on the definition of normal and pathologic here. Still, we try to focus on merging ethical issues into medical ones and how they go parallel to pathologizing and depathologizing human conditions.

Ethicalization of neuroscience

Ethicalization in the philosophy of medicine has been introduced by Henk Ten Have (1997, pp. 105–106). He has argued that the era in which bioethics was born and blossomed is also characterized by the virtual invisibility of the philosophy of medicine as a theoretical and practical endeavor. He attributes this invisibility to three interrelated phenomena. The first is the "Ethicalization" of the philosophy of medicine. Instead of examining the philosophical issues raised by medicine, the focus is increasingly put on ethical issues by people who "have renamed themselves bioethicists." (Stempsey, 2007; Ten Have, 1997; Carson and Burns, 2006)

In this introduction, the question is, while speaking of ethics, are we medicalizing the concepts simultaneously? Or, while trying to approach fundamental Neuroethics, are we ethicalizing the field of Neuroscience and dragging its issues into the realm of Ethics? It is quite an improvement and a step forward in humanity and freedom. Nevertheless, what we intend to discuss here is not making a statement on this issue; we are interested in discussing concepts and how they transform and help transform science and the world we live in.

Neuroethics, an interdisciplinary field between neuroscience and ethics, creates an environment that allows for the Medicalization of ethics and the ethicalization of neuroscience. Nevertheless, what does that mean? Among the topics that involve both fields of neuroscience and Neuroethics, we can point to things like free will, decision-making, and Intention. These have been widely discussed as ethical phenomena. For example, understanding the decision-making process will raise interest in both Neuroscience and Ethics. Since decision making process involves ethical and moral decisions and Neuroscience seems to have answers for the question of decision-making, the line between Neuroscience and Ethics could be possibly blurred.

Although it seems an emerging interdisciplinary field, what we face here is more of an amalgamation than what builds a well-structured and well-defined field of study. The absence of epistemological reflections and a critical-philosophical way of thinking to define the concepts and limitations of the field has left us with ambiguous, hard-to-situate issues with high potential to be drawn into other fields where they do not belong.

Conclusion

To sum it up, this article claims the need for intellectual inquiry, philosophical investigation, and studies to try to define the aim and scope of Neuroethics with a proper understanding of the perils and rough edges we face. In doing so, we first explored the notion of Medicalization, its history, and its effect on human lives and society. Then, we tried to show Medicalization's existing and possible contribution to Neuroethics and how it might affect our understanding of morality and human behavior. We discussed the notion of Ethicalization and the possibility of getting lost in concepts and not knowing where we stand and where we are headed without a definition of the field. We have tried to offer a rhetoric on Medicalization and Ethicalization, which require rethinking and re-examination through Neuroethics. We must pave the way toward providing a proper definition of Medicalization and Ethicalization to avoid misunderstanding and misinterpretation. It is worth noting once more that the field of Neuroethics shares the potential to slither into Medicalization and Ethicalization. We should scrutinize the zone of both Medicalization and Ethicalization in the field of Neuroethics by rethinking the aim and scope of the field and the definition of these two concepts.

Declaration of Competing Interest

Both authors declare no conflict of interest to disclose.

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