

A Preliminary Insight into an Islamic Mechanism for Neuroethics

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Abstract

Muslim relies on the structure or guideline of *shari'ah* or the *maqasid al-shariah*, which consist of five essential values, namely preservation/protection of faith, life, intellect, property, and dignity/lineage – to guide them in discovering guiding principles for new concerns such as posed by neuroscience. Like in the case of brain imaging technology, there is in need for proper explanation within Islamic and among the Muslim scientists/scholars on how Islamic beliefs, values, and practices might cumulatively provide 'different' meanings to the practice and application of this technology, or whether it is in line with the *shari'ah* – in the context of preservation of health and protection of disease. This paper highlights the Islamic mechanism for neuroethics as basis for a holistic ethical framework of neuroscience to cope with its new, modern, and emerging technologies in the globalised world, and how Muslim should response to such changes.

Keywords: neuroscience, bioethics, religion, Fatwa, Muslims, Islamic ethics

Introduction

Islamic medicine stresses the need for the understanding and maintenance of human mental health (1). In fact, the first psychiatric hospitals and insane asylums were built in the Islamic world in Baghdad in 705. An Islamic scholar, Al-Zahrawi (Abulcasis), was considered the father of modern surgery as he developed material and technical designs that are still in use in neurosurgery currently. Today, it is imperative to note that Muslim community seems to be lacking behind and/or have not given much emphasis on the Islamic dimension of the field of neuroscience and its ethical issues vis-à-vis the advancement of its new emerging technologies.

Understanding Neuroethics

Neuroscience is, advancing at a rapid pace, with new technologies and approaches that are creating ethical challenges not easily addressed by current ethical frameworks and guidelines (2). Besides, its advancements are increasingly intersecting with issues of ethical, legal, and social interest. One of the areas that are critical for Muslims to catch up with, is neuroethics. Neuroethics is a young field that is growing in importance. It is a way to check the unethical use or abuse of technologies in the study of neuroscience. It considers the social issues of disease, normality, mortality, lifestyle, and the philosophy of living informed by our understanding of underlying brain mechanisms (3). With new developments such as those related to issues such as brain death,

and technologies such as brain imaging and functional magnetic resonance, the imperative for a guideline that would be in harmony with the Islamic culture deserves serious attention.

The development of predictive tests for incurable neurodegenerative diseases for example, raises a variety of ethical concerns. One fascinating technology is neuroimaging, especially functional Magnetic Resonance Imaging (fMRI) – a technology to understand how the brain's billions of neurons work together to produce thought, emotion, movement and memory. This technology has enabled researchers to better understand vulnerability to Alzheimer's disease, its mechanisms, and treatment response (4). But, along with the discoveries, it could force scientists and society to grapple with a list of ethical issues, such as imaging personal information and privacy, the prediction of untreatable neurodegenerative diseases and the protection of personal neural data (5). This article addresses Islamic values and principles in its encounter with aspects of neuroscience, and the working out of a possible Islamic ethical framework that could provide a holistic guideline in this field.

Essential Values of Islamic Law (*maqasid al-shari'ah*)

A robust Muslim approach to neuroethics might require an emulsion of religious principle and neuroscience that caters for thought, body, and soul. Therefore one must anticipate that Muslim debates in neuroethics will be imbued with Muslim values, symbols and the discrete faith perspectives of this tradition with meanings that are specific to people who share this worldview and their concerns (6).

Traditionally, Muslim relies on the structure or guideline of *shari'ah* or the *maqasid al-shariah*, which consist of five essential values (*al-darurah al-khamsah*) namely preservation/protection of faith, life, intellect, property, and dignity/lineage – to guide humans/Muslims in discovering guiding principles for new concerns such as posed by neuroscience. *Shari'ah* is often understood as the detailed code of conduct, basis or guidelines for ethics, morality and laws that prescribe judgement of right and wrong (7). Two principal sources of *shari'ah* are the Qur'an and the Sunnah (a collection of instructions issued or the examples drawn from the Prophet Muhammad's conduct and behaviour), considered as a reflection of a Divine ethics. Human action in *shari'ah* is not only categorised into good or bad, rather it is divided into five categories namely

wajib (obligatory), *mandub* (recommended), *mubah* (legally neutral), *makruh* (discouraged) and *haram* (prohibited) (8). The ultimate goal of *shari'ah* is as a blessing for mankind and to promote *falaah* (victory) or real well-being of all the people living on earth (9), while Islamic religious concerns are addressed through the issuance of *fatwa* or religious opinions (10).

Renewal of Mindset and Understanding (*tajdid*) for Neuroethics

Fatwa is important to Muslims in tackling issues which are not specifically mentioned in the primary sources of Islam, namely the Quran and the traditions of the Prophet. *Fatwa* acts as an essential guideline for Muslims in many areas including science and technology (10). A *fatwa*, in its literal sense, is an answer or advice for a specific problem (11). From a more technical perspective, a *fatwa* is an explanation or an answer to a question forwarded by any individual or group on matters pertaining to a ruling or *hukum* regarding any aspect of life (8), especially neuroscience. Like in the case of brain imaging mentioned, there is in need for proper explanation within Islamic fora and among the Muslim scientists/scholars on how Islamic beliefs, values and practices might cumulatively provide 'different' meanings to the practice and application of this technology, or whether it is in line with the *shari'ah* – in the context of preservation of health and protection of disease (*hifz al-sihhah wa daf' al-marad*), which is now regarded as the new *daruriyyat* (essential) of *maqasid al-shari'ah* (12).

The essentials in *fatwa* construction are the matters on which the religion and worldly affairs of the people depend upon, the neglect of which will lead to total disruption and disorder. It would not possible for the classical categories of the objectives of Islamic law namely the essential (*daruriyyat*), the complimentary (*al-hajiyyat*), and the embellishments (*al-tahsiniyyat*), to be discovered and formulated without *tajdid al-'aql wal-fahm* (renewal of mindset and understanding) (12). *Tajdid* is critical for Muslims to cope with the challenge of modern and emerging technologies of neuroscience in the globalized world with plural societies.

Conclusion

As a conclusion, religious element should be the central influence in the ethical discourse of neuroscience (neuroethics) of the Muslim

community. Its framework must be based on the Divine ethics, whereby *shari'ah* and its peripheral extension, *fiqh* are the main elements. Hence, in order for the Muslim community to be able to appreciate the role and contribution of neuroscience and its attending ethical principles, it is important for them to address the new *daruriyyat* (essentials) and to explore and formulate new and relevant necessities of *maqasid al-shari'ah* (as proposed in this article) for a more holistic ethical framework of neuroscience that are directly connected with the objective, nature and characteristics of Islamic law, such as justice and peace, free from discrepancies, flexibility, universal, realistic, contemporary, convenient, and blessed.

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Reference

1. Mohamed MY. History of Neuroscience: Arab and Muslim contributions to modern neuroscience, IBRO History of Neuroscience [Internet]. 2008 [cited 2015 Dec 1]. Available from: http://www.ibro.info/Pub/Pub_Main_Display.asp?LC_Docs_ID=3433.
2. Al-Delaimy WK. Ethical concepts and future challenges of neuroimaging: An Islamic perspective. *Sci Engineering Ethics*. 2012;**18(3)**:509–518.
3. Gazzaniga MS. *The ethical brain*. New York (NY): Dana Press; 2005.
4. Farah MJ. *Neuroethics: An overview*. In: Farah M, editor. *Neuroethics, An Introduction with Readings*. Cambridge (MA): MIT Press; 2010.
5. Shen H. US brain project puts focus on ethics. *Nature*. 2013;**500**:261–261.
6. Moosa E. Translating neuroethics: Reflections from Muslim ethics. *Sci Eng Ethics*. 2012;**18**:519–528.
7. Mawdudi AA. *Towards Understanding Islam (Rev. Ed)*. Kuala Lumpur (MY): Dar Al Wahi Publication; 2010. p. 150.
8. Zaidan AK. *Al-Wajiz fi Usul al-Fiqh*. Beirut (LB): Muassasah al-Risalah. 2001.
9. Chapra MU. *The Islamic Vision of Development in the Light of the Maqasid al-Shari'ah* [Internet]. Herndon: The International Institute of Islamic Thought; 2008 [cited 2015 Dec 1]. Available from: http://xa.yimg.com/kq/groups/21494039/1225285914/name/Umer+Chapra+-The+Islamic+Vision+of+Developme nt+-+Umer+Chapra.pdf_%5BXyAx6b%5D.pdf.
10. Saifuddeen SM, Rahman NNA, Isa NM, Baharuddin A. Maqasid al-shari'ah as a complementary framework to conventional bioethics. *Sci Eng Ethics*. 2013;**20(2)**:317–327.
11. Al-Qaradawi, Y. *Al-Fatwa Bayna al-Indibat wa al-Tasayyub*. Cairo (CAI): Dar al-Sahwah. 1988.
12. Nurdeng D. New essential values of *daruriyyah* (necessities) of the objectives of Islamic law (*maqasid al-shari'ah*). *J Hadhari*. 2012;**4(2)**:107–116.