Artificial Intelligence, Social Media, and Suicide Prevention: Principle of Beneficence Besides Respect for Autonomy

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The target article by Laacke et al. (2021) focuses on the specific context of identifying people in social media with a high risk of depression by using artificial intelligence (AI) technologies. It suggests an extended concept of health-related digital autonomy by referring to the classic concept of patient autonomy developed by Beauchamp and Childress. However, as the authors note, autonomy is not the only relevant and necessary principle in this context.

According to Beauchamp and Childress (2019), as one of the four principles of biomedical ethics (respect for autonomy, beneficence, nonmaleficence, and justice), the principle of beneficence refers to a general moral obligation to act for the benefit of others, and the duty of rescue is obligatory beneficence. In biomedical ethics, it is inaccurate to assign moral priority to any one basic principle over the others. However, balancing often occurs in circumstances of contingent conflict and allows for a due consideration of all factors, including relative weights and strengths of different moral norms.

Suicide is a serious international public health problem. The World Health Organization (2019) estimates that approximately 800,000 people die from suicide worldwide, annually (one person every 40 s). A review article on suicide (Fazel and Runeson 2020) states that in high-income countries, half of the persons who have died by suicide are estimated to be linked to mental illnesses, particularly depression and bipolar disorder. In many cases, people with depression, including those who are potentially suicidal, are often underdiagnosed and undertreated due to concerns about stigmatization, discrimination, forced medical treatment, or a lack of available services; worse still, they may not self-identify as being at risk and have poor insight into their mental state. Therefore, they do not seek help from medical offices and hospitals but are likely to disclose suicidal thoughts and risk factors on social media (D’Hotman and Loh 2020; Laacke et al. 2021).

In this paper, we have added a commentary to highlight AI-enabled suicide prevention by using data from social media and to emphasize the principle of beneficence (preventing suicide and saving life) for potentially suicidal individuals.

In Western countries, advances in AI present opportunities for the development of novel suicide prediction tools by using data from social media, such as Google, Facebook, and Apple, to identify which users are at risk of suicide, and implement appropriate interventions, such as free information and counseling services (D’Hotman and Loh 2020).

In 2018, China founded the Tree Hole bot, an AI program that detects suicidal thoughts on Weibo (a popular Twitter-like social platform). The name “tree hole” is inspired by Irish folklore—a tale called “The King with Donkey Ears”—about a man who confided his secrets to a tree. The so-called tree hole on Weibo is a place where people anonymously share their secrets with others. One of the biggest Weibo tree
holes was posted by a 23-year-old depressed student before she committed suicide in 2012. After her death, other users have added more than 1 million comments to her post to date, sharing their own stories or troubles, thus turning these messages into a "tree hole." The Tree Hole bot draws on a knowledge graph of suicide notions and concepts and utilizes semantic analysis programming. It scans the words in tree hole posts on Weibo every four hours and automatically ranks the posts from Level 1–10 according to the certainty of the method and urgency of the suicide. Level 10 means suicide may be in progress and Level 9 means the method of suicide has been determined and the suicide may occur shortly. In these cases, the Tree Hole team will call the police and/or try to contact the user’s families and friends. However, if the ranking is below Level 6, meaning only negative words have been detected, intervention normally does not take place. After having been updated to its sixth version, the accuracy of the Tree Hole bot has reached 82% (Feng 2019; Wang 2019). It prevented 3,629 potential suicides from July 2018 to December 2020 (Global Times 2021).

Social suicide prediction tools in Western countries, which occur outside the healthcare context and are relatively unregulated, may pose risks to the users’ privacy, autonomy, and safety (Marks 2019). However, despite these controversies, it is generally accepted that respect for beneficence has more weight than respect for autonomy in China. We focus on three key reasons that are most cardinal to consider in Chinese culture.

Firstly, suicide violates the Confucian virtue of filial piety. The Classic of Filial Piety says, “Our bodies to every hair and bit of skin are received by us from our parents, and we must not presume to injure or wound them: this is the beginning of filial piety” (Fan 1999, 153). It argues that children do not exist on their own but owe their existence to their parents. Parents are the authors of one’s biological life, therefore, one does not have the autonomy to dispose of life as they wish. Sacrificing one’s life, either actively or passively, to uphold ren and yi (benevolence and justice), such as the sake of the country or saving other lives, has been morally permissible, and even praiseworthy. However, most self-regarding suicides, such as that due to chronic depression, financial or marital troubles, fear of punishment or failures, and others, have been evaluated as “self-destruction” or “self-slaughter,” which means that they are generally not advocated and are regarded as morally incorrect (Fan 1999).

Secondly, there is great emphasis on beneficence in Chinese culture. The principle of beneficence is considered Confucius’ principle of ren, the doctrinal core of Confucianism. It is the foundation of morality, the origin of all virtues, and the basis of all goodness. The principle of ren, which has been translated as “benevolence,” “humaneness,” “love,” and so on, represents the love one should have toward fellow people and refers to actions done for the benefit of others, signifying the ideal relationship between individuals (Fan 1999; Tsai 1999, 2005). Preventing suicide and saving lives is a realization of humanity and an embodiment of the principle of beneficence.

Thirdly, individual autonomy is often replaced by family-based decision making in China. The ancient Chinese Empire was a society of classes, patriarchy, and paternalism. In China, the core characterization of the Confucian personhood is found in one’s social nature. Family is regarded as containing the most important relationships for individuals and it is the most basic unit in social organizations. Individuals may not value their right to autonomous decision making and choose a family-based one to perform familial obligations, strengthen intimate relationships, and promote collective harmony (Fan 1999; Tsai 1999, 2005; Zhang et al. 2021).

Thus, in the context of traditional Chinese culture, the emphasis on filial piety, benevolence, and family values will influence the application of the bioethical principles and tend to give more weight to "beneficence" than to the respect for autonomy and individual rights. This is different from the mainstream of contemporary Western bioethics, which tends to argue more for autonomy, self-determination, and privacy (Tsai 1999, 2005).

However, compared to the West during the 1950s–1960s, the history of bioethics in China was rather short, and was introduced in the mainland during the reform and opening-up policy in the late 1970s and early 1980s (Li 2008). Additionally, in ancient Chinese medical ethics, respecting a patient’s autonomy was not specifically mentioned (Tsai 1999). Since autonomy is a relatively modern ethical concept in China, the new concept of health-related digital autonomy (Laacke et al. 2021) can provide a reference for future applications of AI-based disease detectors using data from social media in this country.

In this paper, we wish to enrich and motivate the understanding of diverse cultural beliefs and values by comparing the differences in weighing between principles of beneficence and respect for autonomy between
China and Western countries. In our view, moral principles, through balancing and weighting, should be applied across cultures and internationally. Given that this is a nascent area of research, this study is limited to an analysis at the theoretical level. Hence, we agree with Laacke et al.’s (2021) opinion that further research and empirical studies on different stakeholders, such as users, suicide survivors, and their family members is important.

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