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ORIGINAL PAPER

Who Regulates Ethics in the Virtual World?

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Abstract This paper attempts to give an insight into emerging ethical issues due to the increased usage of the Internet in our lives. We discuss three main theoretical approaches relating to the ethics involved in the information technology (IT) era: first, the use of IT as a tool; second, the use of social constructivist methods; and third, the approach of phenomenologists. Certain aspects of ethics and IT have been discussed based on a phenomenological approach and moral development. Further, ethical issues related to social networking sites are discussed. A plausible way to make the virtual world ethically responsive is collective responsibility which proposes that society has the power to influence but not control behavior in the virtual world.

Keywords Ethics · Technology · Virtual world · Social networking sites · Society

Introduction

"The altered, always enlarged nature of human action, with the magnitude and novelty of its works and their impact on man's global future, raises new moral issues. A new reflection on ethical principles is required." (Jonas 1984) In the first

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tenet of ethics and technological responsibility, Jonas emphasizes the need for reflection on the relationship between ethics and technology in the present era.

The question regarding what is right and what is wrong has intrigued many philosophers since Plato's time, and various attempts have been made to answer this. The question, and its answer, belongs to a field of moral philosophy that deals with the standards by which behavior should be regulated. This discipline is known as "ethics" which defines an action as right or wrong, according to a particular social context, and attempts to provide a framework within which people behave in accordance with societal norms.

In this paper, we have not attempted to get into the minutiae of the operational definition or the philosophical aspect of ethics, but rather focus upon the impact of current technological advancements on ethics. Specifically, we have tried to determine the effect of the virtual world on ethics and societal behavior.

Technology has become an integral part of the majority of real-life applications. The relationship between ethics and technology therefore can be viewed from two perspectives: first, from the perspective of the designer, and second, from the perspective of the user. In fact, most classical studies (Heidegger 1977) in ethics and technology refer to the ethical considerations necessary in the design of an appropriate technology e.g., issues of copyright and patenting. The wide availability and usability of technology today make it necessary to understand ethics not only from the designer's viewpoint but also from that of the user. Based on the available literature concerning the contemporary issues of ethics and technology, we have adopted three major approaches: (1) information technology (IT) as an artifact or tool, (2) social constructivism, and (3) phenomenology.

IT as an Artifact or Tool

IT used as an artifact or tool (Introna 2011) assumes that information and communication technology (ICT) is simply a tool and that its usage depends on the objectives and choices of an individual. Use of such an artifact helps to increase individuals' efficiency and ease of use. For example, the use of a word-processor instead of a pen and paper does not involve any kind of social interaction and does not affect any kind of social relationship. Therefore, the involvement of ethics in this approach lies mainly in the designer considering that the design of a particular technology is rational and objective and considering "fit for purpose" for the user with regard to cost, efficacy and safety.

Social Constructivism

In social constructivism (Introna 2011), the relationship between society and technology is explored. Many cultural, political and economic factors are responsible for shaping, designing and thus implementing technology in society. The most common example of this approach is found in the designing and engineering of software applications or mobile technology. Their design and usage are continuously changing according to the demands of the user, along with other social implications. Bearing these factors in mind, actions and decisions are taken

by designers, both individually and collectively. The user is not directly involved. Social constructivism thus assumes a two-way interaction between society and technology, leaving much scope for ethics and values to be integrated into the design and usage of the technology.

Phenomenology

Phenomenology (Introna 2011) assumes that technology and society are codependent. For example, social networking sites (SNSs), games and other entertainment sites are designed for the need of the users from an entertainment perspective, mainly involving direct interactions with these users. This approach also assumes the relationship of technology and society at an existential level, therefore providing many opportunities for exploration when studying ethics and technology as existential artifacts.

According to Nielsen and NM Incite's Social Media Report (2012), the total time spent on social media in the USA across PCs and mobile devices increased from 88 billion minutes in July 2011 to 121 billion minutes in July 2012. The person-to-person interactions and the interactions within virtual worlds have different contexts, dimensions and ethical problems but these have not yet been fully clarified. Further, it has not yet been realized that ethics are involved in this process. This paper examines ethics from the perspective of phenomenology, in which ethics is viewed from the viewpoint of both the designer and the user, though the major focus is on the user.

Society and Technology

Comparing the interrelationships of society and technology, social constructivism finds a linear relationship between society and technology. It proposes that it is not only technology that has an impact on society but also vice versa. Technology itself is an outcome of complex and subtle social processes and practices (Introna 2011). However, phenomenology shows the evolution between society and technology as they are codependent from the outset (Fig. 1). Stiegler (1998) propounds that mankind and technology have been mutually dependent on each other from the start and also complement each other. It is therefore apparent that the design or advancements of new technological systems will also shape the standpoint of future generations. Hence, there is a co-evolution of technology and mankind. This fact somehow, has not had the due attention, considerations and focus it deserves. Designers of technology often display a lack of awareness regarding ethical decisions. In addition to these observations, it has also been found that users often read and use technology in ways unintended by the designers or implementers (Introna 2011).

The current technological age is extremely different from the pre-technological age. According to Mesthene (1997), technology appears to induce social change in two ways: first, by creating new opportunities and second, by generating new problems for individuals and society.

Fig. 1 Relation between Society and Technology

One of the most common forms of technology is the Internet. Owing to globalization and the power of the Internet, SNSs are being used by a large number of people. Many people have integrated these sites into their daily practices. There are hundreds of SNSs with various affordances, supporting a wide range of interests and practices. The core concept of virtual existence is common to all. This allures people to a virtual world, leading to many serious ethical issues.

One of the most important aspects in individuals in relation to ethics and technology is the development of morality. This is best explained by the social cognition domain model devised by E. Turiel (1978). According to Turiel, it is generally assumed that both morality and social convention exist in the same domain. However, morality comes from a moral domain and social convention from a conceptual domain. These domains differ from each other and exist independently as does any other domain of social knowledge. Morals (and individual ethics) have an intrinsically introspective basis and social conventions have an extrinsically descriptive basis (Turiel 1978). Morals reflect individual ethics in a person and social ethics are reflected by the social conventions of a social cognition model.

It is the concept of virtual existence that has added a new layer of complexity to ethical issues at an individual and social level (Fig. 2). Therefore, phenomenology provides the basis from which some critical and basic questions regarding ethics may be answered, namely: how does use of a virtual world and SNSs affect the identity of individuals? how does it shape our attitudes and behavior? can technology be used for shaping the behavior of an individual and of the population as a whole? Though we have been discussing these issues from a psychological and philosophical perspective, while at the same time focusing upon the practical implications of ethics in technology, in the next section we will address some basic general ethical issues from the viewpoint of both the designer and the user.

Ethical Issues in the Virtual World

One of the most important components of the virtual world is SNSs. These are becoming integral elements of the social computing paradigm. Wang et al. (2007) define social computing as: "Computational facilitation of social studies and human social dynamics as well as the design and use of information and communication

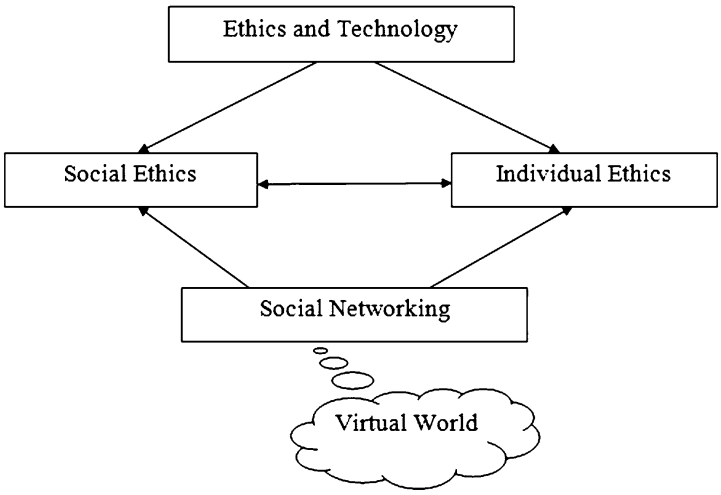

Fig. 2 Ethics and Technology

technologies that consider social context." This highlights the importance of social context in technology and human behavior. The success of social computing systems, whose content is created almost entirely by the user, depends on the willingness of the participant to share in a social environment that is virtual (Nov and Wattal 2009). SNSs allow users to create profiles that maintain a record of personal information submitted solely by the user. The profile may contain details such as the user's birthday, contact information, favorite music or favorite hangouts. This information is shared with other users to facilitate networking and to generate traffic for the website (Johnson 1997).

Unfortunately, two of the major SNSs in the United States today, Facebook and MySpace are motivated by profit. Codes of ethics for the designers in this case are either not defined or not put into practice. Enforcing this can cause major problems, because their profits are dependent on the flow of personal information about their customers to the advertisement agencies, which brings in revenue for such sites. Issues that represent the need for ethics at a user level as well as a designer level are described below.

Privacy Issues

The collection and sharing of personal information is inherent in SNSs, which may raise concerns about privacy. Users generally do not have a good understanding of the threats to their privacy when they provide their personal details. It is only felt when a privacy threat is faced, and even then the reasons behind these issues are not known to them. James Rachels' theory (Mooradian 2009) explicates the importance of privacy in normal, everyday circumstances, when nothing of great importance seems to be at stake. The privacy issues get more complicated in ubiquitous social computing systems, as these combine online social interactions with context-aware computing. Motahari et al. (2007) have grouped these kinds of threats into the following seven categories:

(1) Inappropriate use by administrators.
(2) Legal obligations.
(3) Inadequate security.
(4) Designed invasion (poor feature).
(5) Social inference through lack of entropy.
(6) Social inference through persistent user observation.
(7) Social leveraging of privileged data.

Route to Addiction

In 1998, Martin Mayo proposed two hypotheses to support the claim that the Internet leads to a decline in psychological and social well-being. Initially, time spent online may take time away from more valuable activities, including social contacts, sleep or reading books, hence indulging more in the virtual world is an attempt to evade the real world. Later, it may be that Internet activity itself is somehow to be blamed. For example, it is possible that many of the social relationships people maintain online are less substantial and sustaining than those in their actual lives. Alternatively, it may be that the current technology of computer-mediated communication is a less adequate medium for social communication than the telephone or face-to-face interactions it displaces.

In March 2005, a government clinic for Internet addiction was opened at the Beijing Military Region Central Hospital in the People's Republic of China. It treats patients mostly aged 14–24 years, who suffer from anxiety, depression and lack of sleep, often owing to long hours spent on online video games and chats. Treatments include Internet "cold turkey," counseling, physical activity, antidepressants and the enforcement of strict regular sleeping patterns.

Young (1999) argues that there are five different types of internet addictions, namely computer addiction (i.e., computer game addiction), information overload (i.e., web surfing addiction), net compulsions (i.e., online gambling or online shopping addiction), cybersexual addiction (i.e., online pornography or online sex addiction) and cyber-relationship addiction (i.e., an addiction to online relationships). SNS addiction appears to fall into the last category since the purpose and main motivation for using SNSs is to establish and maintain both online and offline relationships (Kuss and Griffiths 2011) and can be better called "SNS Addiction Disorder." Users feel an urge to use SNSs more and more, and become restless or troubled if prohibited from doing so.

Rheingold (1993) has carried out extensive research on Multi-User Dungeons (MUDs), which are similar to SNSs. His main finding was that MUDs are living laboratories for studying the first level impact of virtual communities: the impact on our psyches and on our thoughts and feelings as individuals. He analyzed the impacts of phenomena including MUDs on our real-life relationships and communities, which lead to fundamental questions about social values in an age when so many human relationships are mediated by communication technology.

Virtual Abuse

The problem of virtual abuse in SNSs is quite frequent. One typical case is as follows: a woman in an online discussion group on women's issues discovers that a participant whom she believed to be an older single woman confined to a wheelchair and to whom she has disclosed her private secrets, is in reality a male psychiatrist in his 30s (Charles 1987). Individuals feel deceived and betrayed when these kinds of situations arise. Studies on the users of SNSs show that if they do not adopt the necessary privacy settings that are provided within the website, it may lead to serious consequences such as cyber stalking and identity theft (Light and McGrath 2010).

Vulnerable Environment

One message sent by one individual using SNS can reach vast numbers of individuals around the world very quickly. An idea posted to an electronic bulletin board reaches thousands of people around the world in a fraction of a second. In addition, the individuals can communicate without revealing their identity by using pseudonyms and adopting different personas. Moreover, one person can take someone else's words and alter them or take someone else's identity and spread their words in a way that was unintended by the true user. Hence, the issue of anonymity is a major concern too. The reproducibility of online information in such a way that the original owner of the information would not notice is also a major worry.

Increasing Crime Rate

In the past five years, SNSs have become increasingly popular among Internet users, especially teenagers, as a place in which they can meet other people, communicate and exchange information. It has been found that 73 % of American teens now use SNSs. Just over half of online teenagers (55 %) used SNSs in November 2006 and 65 % did so in February 2008. With their increasing popularity, these sites have also become a virtual playground for criminals and potential child predators and for bullies who may hide behind a veil of anonymity or false identity to communicate with, and prey upon, potential victims (ref. Social networking sites 2010).

Ethics in SNSs are quite useful as, even though there is no control over what people exchange in their social relations, unwanted social revelations can be prevented. Examining the ethics related to users reveals some disturbing and disruptive behavior ranging from unauthorized access, theft of electronic property (Spafford 1995), launching of destructive worms and viruses (Branscomb 1990), racism, defamation (Charles 1987), and harassment relating to an incident that involved a form of online rape (Charles 1987). Such examples force us to think deeply about the use of ethics to regulate users for better online communication.

The issues discussed above show the importance of individual ethics, as well as social ethics, in the virtual world of SNSs. Next, we propose a solution for the issues surrounding individual and social ethics in SNSs.

A Proposed Solution for Ethical Issues in the Virtual World

In this section, we have attempted to propose a solution for how individual ethics leading to social ethics can contribute to the regulation of the virtual world (and SNSs), focusing on collective responsibility.

Both organized groups and unorganized groups exist, whose actions lead to collective responsibility. Organized groups have well-ordered decision-making procedures (e.g., a governing board or a representative body); unorganized groups operate in an uncontrolled manner, though certain common attitudes are shared between its members. These groups comprise a diverse range of individuals with diverse values. The virtual world of the Internet and SNSs reveals an unorganized type of behavior, which leads to the ethical question: how far can its users be held responsible for the unethical behavior shown within the sites? In addition, if any group using these sites does any harm to society, then can every user of the group be held responsible for the harm? While collective entities generally act through their individual members, their actions do not coincide with each individual member's actions (Smiley 2011). May (1987) states a relational based condition under which he says that for an action to be collective, the individuals should be related to each other so as to enable each to act in ways that they could not manage on their own. The behavior of SNSs is collective which involves shared mental states and hence shared minds. This collective mind is responsible for its collective responsibility.

Ethical issues relating to technology, computing and the virtual world, need to be addressed at both an individual level as well as a societal level. The paradox of the situation is that the root cause of the ethical problems associated with the Internet (and SNSs) is individual ethics but this is influencing social ethics as well. Conversely, prevention of such problems demands social intervention and awareness.

The individual ethics of users can be examined in terms of their level of individual freedom and personal responsibility for the use of the technology. It has been found that in the case of SNSs, the degree of individual freedom of users is very high while personal responsibility is very low. This points directly to the low degree of collective responsibility (Fig. 3) and therefore is a concern for ethical issues in society. Hence, unorganized groups like SNSs are linked to a high degree of individual freedom and low personal responsibility which leads to less collective responsibility. Thus, there is less of a sense of responsibility in the virtual world in terms of ethics.

However, in the real world, people exhibit a low degree of freedom and a high degree of personal as well as collective responsibility. Hence, they have different domains of individual as well as social ethics related to this. Therefore, ethics in reality and ethics in the virtual world cannot be viewed in the same way. In addition, many rules and regulations, such as cyber laws have been framed to create a differentiation between the two and to create a balance between the degree and the amount of freedom and responsibility. Thus, one of the foremost measures to improve ethics in the virtual world is to ensure that individual freedom should not exceed personal as well as collective responsibility.

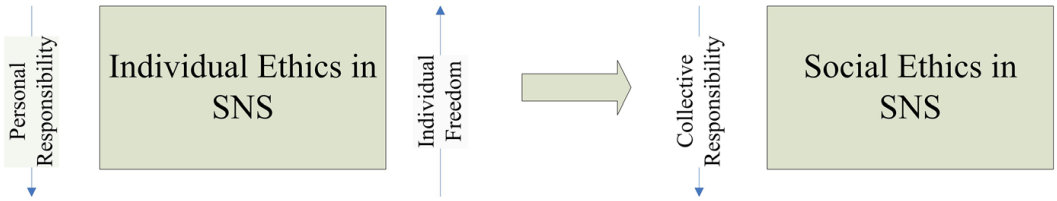

Fig. 3 Collective Responsibility in virtual world of SNS

The most important aspect of ethics is society. Even Ermann et al. (1997), in their book "Computers, Ethics, and Society," have emphasized that although technology has the potential to improve or undermine our quality of life, it is ultimately society that has the power to decide how computers will affect our lives. Different groups, societies and countries have defined their own set of regulated behavior regarding right and wrong. Ethics are extremely dependent on society to shape, maintain and pass on ethical laws to the next generation. To conclude, it can be said that ethical issues associated with in SNSs can be reduced by integrating collective responsibility with SNSs.

Conclusion

In this paper, we have presented some important aspects of ethical issues that are emerging as a result of technological advancements. The wide acceptability and use of the virtual world and SNSs have given rise to many issues such as privacy threats, addiction, virtual abuse and a vulnerable environment. The questions of existing theories on ethics and technology majorly focus on the user and the designer but all those theories do not refer to a plausible result of shaping moral and individual ethics in the virtual world. So, we here propose a viable solution based on collective responsibility to cope up with problems of the virtual world.

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