Digitally Mediated World

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The contributions to this volume illustrate the diversity of debates which AI & Society continues to promote, i.e., multiple paths of the emergence of technologies and an ethics of embracing multiple descriptions and technological actions. In the era of the Internet, it is necessary more than ever to set the discourse not only on the potential of emerging technologies in areas such as medicine, health-care, agriculture, and education, but also a reflection on the limitation of the realm of the virtual society. In doing so, one of the fundamental questions we face is how to remain true to our human ethos when being mediated by technology. Some of the issues covered in this volume include technology-mediated world, social media, sociable robots, social and cultural relevance of digital technologies, cyber sociality, the virtual other, the distributed and yet fragile nature of the emerging virtual institutions, and the role of classical myths as interpretative metaphors of the virtual world.

The information-overloaded societies thus face the challenge of technology opening new windows of opportunity on the one hand while closing doors of freedom through the instrument of control and surveillance on the other hand. On the potential of technologies, we are invited to learn about the increasing application of techniques such as visualization, imaging and neural networks in criminology, medicine, spoken language interface, health care, and agriculture. We ask, what new windows of opportunity is social media such as Facebook opening for presenting self to others? In what ways our relationship with the social media has changed over the generations? Could it be that post-modern technologies such as virtual humans and

sociable robots represent the continuum of technology of liberation (e.g., liberation from hunger, poverty, manual toil) of the past or they are merely a mirage of cyber realities in the guise of liberating intelligences. Should we be concerned with highly seductive simulations of social realities in which virtual others, as instances of post-modern hyperreality, entice us to fall into the trap of collective conception of cyber sociality as authentic sociality invoking a sense of cyber self as social presence?

In this emerging technological world of virtual others, we should reflect upon and critically examine the potential as well as the ethical implications of technological companions, such as robot caregivers, playmates, assistive devices, and toys, especially those of companion robots designed for children with certain types of aesthetic features. This also calls for the critical examination of the nature and appropriateness of existing societal institutions and their role in widely accepted interactions among human beings. But how to view the engagement of the technological artefacts as diverse as robotics, pedagogical games, interactive installations, and virtual reality applications in societal dimensions? Could the Heideggerian concepts, such as that of ‘a way of being’, be mapped onto the more familiar languages and vocabularies of psychology to understand the nature of this engagement. It is suggested that although the distributed and collaborative nature of virtual institutions, together with their agility and low cost, make them a very interesting social model, traditional information management models of social institutions may not be appropriate to examine the functioning of these virtually distributed institutions. We should, however, also recognize that virtual institutions may also be rather fragile and may not be amenable to that the traditional information management models. This thus may require the formulation and institution of much stronger

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rules and norms, as well as an appropriate social framework to sustain their durability. We learn about the role of classical myths as interpretative metaphors or similes for people, settings, and situations relating to the computer world, as illustrated by the use of widely accepted terms like Trojan or Trojan horse, cyberphobia, or Project Athena or metaphors such as Odysseus, Ulysses, Mentor or The-seus as a powerful anti-virus.

Beyond the potential and ethical concerns of the virtual world, we also learn how visualization techniques are being used to access massive amounts of crime information and as a new tool for mapping criminal phenomena through processing of this large amount of data. This is in response to law enforcement agencies who are always seeking more and more powerful electronic tools to efficiently and effectively process crime data within demographic contexts. Just as emerging technology is making its uneasy presence felt in the social arena, functional technology of computer-aided design is being used to enhance our knowledge of plant species, for example the identification of plant species by using images of flowers. It is argued that a neural network model can be used as an effective instrument of fruit quality estimation. As a classification simulator, artificial neural network provides a tool to evaluate the ‘agreement’ between the experimental data and predicted values, and thus presents an alternative method for assessment of fruit quality, providing consumers with a safer food supply. And imaging technology

is being used in detecting dental abnormalities. We learn how in the field of automated diagnosis, computed tomography images are being widely used in the diagnosis of severe medical conditions such as intracranial hematoma and hemorrhage, and how data mining algorithms are being employed for making predictions in the domain of medical diagnosis and analyze their efficiency. We further learn how researchers are exploring the use of imaging and word recognition techniques for designing spoken interfaces, aimed at enabling people with physical disabilities to access digitised information in regional languages such as Tamil. This interface development is seen in the broader cultural context of preserving historical Tamil literature by transforming the traditional form of ancient handwritten and machine printed documents, to the digital form. Envisioning development from an inclusive perspectives, it is suggested that professional education can open opportunities for equity of women participation and career opportunities in developing countries. Together with policies of women empowerment, it is suggested that the new mediated and interactive technologies should also be incorporated in the women empowerment policies, thereby opening further doors for women participation in society in Pakistan.

Within its culture of hospitality to diversity and plurality of ideas, argument, and reflection, AI & Society continues to welcome contributions on over the horizon debates in arts, media, technology, and society.