Chapter 25
The Criticality of an ICT Ethics Backbone for Transformation and Social Equality in E–Learning

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ABSTRACT
The ethics backbone for information and communications technologies (ICT) guides the evolution of the socio-technical spaces and technologies on the WWW and Internet. This backbone directs the ways people harness information for education and social betterment; how they create virtual communities, and what digital contents they share. There are numerous stakeholders to transformative e-learning throughout the world, both now and in the future. To achieve the realities of transformative e-learning that leads to social equality, it helps to first understand the guiding ethical values underpinning these technologies; in addition, it will be important to engage these ethics and to shape them in ways that would optimize e-learning as a force for the greater good. In an information society, e-learning educators need a solid grasp of ICT-based ethical reasoning and practice.

INTRODUCTION
The concepts of “social equality” and “transformation” are necessarily complex and different ones depending on different stakeholder interests and groups. Some global concepts of social equality deal with issues of access to resources for livelihoods, housing, food, medical care, and general well-being. There are principles of gender equality; non-discrimination regarding class, age, race, religion, nationality, or ethnicity; human rights; property rights; the freedom of religion; the peaceful resolution of national or people-group differences, and the addressing of environmental issues through cooperative endeavors. These various rights may harmonize in some cases but diverge in others, particularly with over a billion people with access to the Internet (Zhou, 2007).

What may be considered justice to one group may be considered the diametric opposite to another. People’s interactions are based on different perspectives and different weights and scales. The
The diversity of a worldwide audience means that there are numerous frames of cultural reference, political values, community ideals, and understandings. There are various venues to engage similarities and differences between peoples, but that realm is not for this chapter. Rather, this chapter will address the extant and expressed ethics of information and communications technologies (ICT).

The ideals of e-learning for social transformation and equality are built on a substructure of information and communication technologies ethics. Any technology that connects the world’s people in real time, that archives intellectual property, and that offers back-end informational insights about real-time thoughts is going to raise security and ethical concerns. For many, these are invisible values because they are rarely expressed in the public sphere. The pervasive nature of ICT suggests the importance of having transparent ethical codes. Societies are constantly evolving, and with the changing awarenesses and human needs, there have been calls for new principles, laws (Urbas, 2004), and ethical frameworks to provide guidelines for creating and deploying technological capabilities. People do go to online immersive spaces for their psychogenic needs [defined in the six categories of “materialism, power, affiliation, achievement, information, and sensual needs” (Murray, 1938, as cited in Bostan, 2009, p. 22)]. Indeed, there are spillover effects from the virtual parallel worlds into the real, with real property and real value traded for “virtual” value (Cikic, Grotte, Lehmann-Grube, & Sablatnig, 2008). Identity issues played out in the virtual may spill over into lived lives in the real (Holton, 1998). A central axiom regarding cyberworlds is that such spaces abstract “human history” and offer “conceptual education models based on scale-free-network(s)” (Osaki, Hiraga, & Kunii, 2005, p. FSE-13). Practitioners have expressed worries about the negative effects of information technology (IT) on face-to-face social and family time (Bilal, Hassan, & Martin, 2006, p. 6).

**“MACHINE ETHICS”**

Several arguments have been deployed to suggest that a computer system cannot be held accountable ethically because it’s not human (the a priori argument), is a “dumb instrument” with no “free will” and no larger sense of the context (known as “the right mind” argument), and because it is one part of a larger technological system, has only dilute “responsibility” (Arnold & Pearce, 2008, p. 46). People have moved past the debate over whether (computing) “machine ethics” should be pursued, and it’s clear that some affordances for ethical and unethical actions have been coded into the hard wiring of the machines and socio-technical systems. Computing machines function in the human context and cannot be considered in a sui generis, non-contextualized way (Schmalz & Conway, 2008, p. 23).

The fact that there are laws written into the machines that shape, structure, and constrain human behaviors suggests that there should be moral debates (Brey, 2000). Information technologies change “the way we perceive ourselves and the way we can discharge our responsibilities” (Stahl, 2002, n.p.). Whatever has been created has always been multi-use, with intended and unintended consequences, some of them patently unforeseen at the time of creation. The transformative potential of technologies (Muñoz, 2008, p. 45) argues for the need for ethical considerations.

**STAKEHOLDER GROUPS FOR INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) ETHICS**

A variety of stakeholder groups have vested and competing interests in terms of the ethical standards people would use and live by. For the foreseeable future, these will be contested issues, without easily or widely accepted consensus Figure 1).
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