Identifying the Ethics of Emerging Information and Communication Technologies:
An Essay on Issues, Concepts and Method

Bernd Carsten Stahl, De Montfort University, UK

Richard Heersmink, Delft University of Technology, The Netherlands

Philippe Goujon, Facultés Universitaires Notre-Dame de la Paix, Belgium

Catherine Flick, Facultés Universitaires Notre-Dame de la Paix, Belgium

Jeroen van den Hoven, Delft University of Technology, The Netherlands

Kutoma J. Wakunuma, De Montfort University, UK

Veikko Ikonen, VTT (Technical Research Centre of Finland), Finland

Michael Rader, Karlsruhe Institute of Technology, Germany

ABSTRACT

Ethical issues of information and communication technologies (ICTs) are important because they can have significant effects on human liberty, happiness, and people's ability to lead a good life. They are also of functional interest because they can determine whether technologies are used and whether their positive potential can unfold. For these reasons, policy makers are interested in finding out what these issues are and how they can be addressed. The best way of creating ICT policy that is sensitive to ethical issues pertain to being proactive in addressing such issues at an early stage of the technology life cycle. The present paper uses this position as a starting point and discusses how knowledge of ethical aspects of emerging ICTs can be gained. It develops a methodology that goes beyond established futures methodologies to cater for the difficult nature of ethical issues. The authors outline how the description of emerging ICTs can be used for an ethical analysis.

Keywords: Concepts, Emerging ICT, Ethical Analysis, Ethics, Methodology

INTRODUCTION

If we knew the consequences of novel technologies, then we would be in a better position to leverage or address them. Expected and unexpected positive results could be supported and strengthened while problems could be avoided or mitigated. An important aspect of the consequences of technologies is related to moral perceptions and ethical norms. In the area of

information and communication technologies (ICTs), prominent examples of such issues are those of privacy, intellectual property, security and access. But how can we know these consequences?

This question is of central importance to policy makers who wish to be proactive in addressing moral and ethical issues. Despite its importance, it is an exceptionally difficult question to answer. The combination of uncertainty of the future, conceptual issues surrounding the very term "technology", the potential infinity of issues and the problems of contextualising abstract issues combine to render ethics of emerging technologies all but intractable. And yet, giving up in the face of these problems is no viable solution either. Not exploring ethics of emerging technologies constitutes one possible choice in dealing with them. And this is arguably the worst possible choice. It is arguably the worst choice because leaving potential ethical issues of emerging technologies unattended to does not make the problems go away but may only exacerbate them when the technologies finally come to fruition. Therefore, finding ways of trying to deal with them even though they may not be conclusive helps to initiate and potentially find a solution to for some if not all ethical problems.

This leaves scholars with an interest in ethics and emerging ICTs in the position of having to come up with workable solutions to finding out what possible issues may be, knowing full well that any result they produce may be more than fallible. While there has been some attention to the problem of ethics of emerging technologies (Sollie & Düwell, 2009), there is little in terms of practical guidance on how to identify emerging technologies and the ethical issues they raise. The present paper outlines a methodological approach that fills this gap in knowledge and allows a robust, transparent and rigorous method of identifying the ethics of emerging ICTs. It starts out by describing how the technologies themselves can be identified. This includes a discussion of the different problems such future oriented research faces. On the basis of the exploration of these issues,

the paper then presents the different steps of the suggested methodology. This leads to the question of the ethics analysis of the emerging ICTs. The conclusion will reflect on the limitations of this approach and further research.

While the paper concentrates on information and communication technologies, it is of relevance to other aspects of the field of technoethics. Where technoethics is the interdisciplinary field that addresses moral and ethical concerns arising due to the social use of technologies, questions of emerging technologies and possible policy responses are relevant. In addition, the field of ICT is increasingly linked to most other socially relevant technologies such as nanotechnology or biotechnology to the point where many scholars speak of the convergence of technologies. An indication of this increasing interlinking was the recent 2009 conference of the Society for Technology and Philosophy which was dedicated to the topic of these converging technologies (see: http://www.utwente.nl/ceptes/spt2009/). Conceptual and methodological questions arising from ICTs are thus a core concern that the novel field of technoethics needs to come to grips with.

The paper presents and justifies the choices made by the consortium of the ETICA project, a European research project funded under the 7th Framework Programme. (For more details on the project see www.etica-project.eu) It explains the way in which the members of this project have come to a conclusion on these difficult problems. This does not imply that the solutions and methodological choices discussed here are the only ones possible. Despite the provenance from a particular research project, the paper addresses the general issue of methodology in ethics in technology and thereby makes an important contribution to the discourse on ethics in technology, specifically ICTs. It represents a contribution to epistemology and methodology in technoethics. It is important to note, however, that the epistemological and methodological problems discussed here are not merely theoretical but of primary importance of practice. Technology policy that wants to be

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/identifying-ethics-emerging-information-communication/48521

Related Content

Chicken Killers or Bandwidth Patriots?: A Case Study of Ethics in Virtual Reality
Kurt Reymers (2011). *International Journal of Technoethics (pp. 1-22).*
www.irma-international.org/article/chicken-killers-bandwidth-patriots/58324

The New Digital Wave of Rationalization: A Loss of Autonomy
Lambèr Royakkersand Rinie van Est (2020). *International Journal of Technoethics (pp. 59-74).*
www.irma-international.org/article/the-new-digital-wave-of-rationalization/258848

Exploiting P2P in New Media Distribution
Marcus Mansukhani, He Yeand Ma Zhaoran (2013). *Digital Rights Management: Concepts, Methodologies, Tools, and Applications (pp. 479-487).*
www.irma-international.org/chapter/exploiting-p2p-new-media-distribution/70989

Biomedical Technoethics
Luppicini Rocci (2010). *Technoethics and the Evolving Knowledge Society: Ethical Issues in Technological Design, Research, Development, and Innovation (pp. 128-145).*
www.irma-international.org/chapter/biomedical-technoethics/40605

The Ethical Dilemma over Money in Special Education
Jennifer Candor (2009). *Handbook of Research on Technoethics (pp. 409-425).*
www.irma-international.org/chapter/ethical-dilemma-over-money-special/21594