Philos. Technol.
DOI 10.1007/s13347-015-0193-z

INTRODUCTION

Information Societies, Ethical Enquiries

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The special issue collects a selection of papers presented during the Computer Ethics: Philosophical Enquiries (CEPE) 2013 conference. This is a series of conferences organized by the International Association for Ethics and Information Technology (INSEIT) (http://inseit.net/), a professional organization formed in 2001 and which gathers experts in information and computer ethics prompting interdisciplinary research and discussions on ethical problems related to design and deployment of information and communication technologies (ICTs). During the past two decades, CEPE conferences have been a focal point for the research concerning crucial topics (Buchanan 1999, 2011), such as privacy (Hildebrandt, Mireille 2008), online trust (Taddeo 2010; Taddeo and Floridi 2011), online identity (Ess 2012), value-sensitive design (Friedman and Peter H. Kahn, Alan Borning 2006), cyber-warfare (Floridi and Taddeo 2014; Taddeo, Mariarosaria 2014), along with education and professional ethics (Buchanan and D. Ocholla 2011).

In this special issue, we present the reader with six articles dwelling upon ethical problems characterizing contemporary information societies: *The Democratic Governance of Information Societies*: *A Critique to the Theory of Stakeholders*, *Semantic Web Regulatory Models*: *Why Ethics Matter*, *The Realignment of the Sources of the Law and their Meaning in an Information Society*, *Levels of Trust in the Context of Machine Ethics*, *Developing Automated Deceptions and the Impact on Trust*, and *Moral Deskilling and Upskilling in a New Machine Age*: *Reflections on the Ambiguous Future of Character*. In addition, this issue also includes a commentary describing *the Online Manifesto Initiative*; more on this presently.

Media, academic articles, policy debates, and everyday discussions increasingly focus on the informational, technology-driven turn—the information revolution—that characterizes this historical moment, in which widely disseminated and radical changes simultaneously affect both individuals and societies. Over the past two decades, these

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Published online: 18 February 2015

very same changes have been redefining individuals' daily practices and societies' priorities, and they are also challenging the way we perceive ourselves and the environments in which we live (Floridi 2014a), proving the information revolution to be both a technological and a *conceptual* revolution.

Such conceptual and pragmatic changes pose new questions concerning individual well-being and the governance of societies, the regulation of design and deployment of technological artefacts, the understanding of "good" and "evil", of what we "should" and "should not" do, and of what we believe and experience. In this scenario, issues concerning the occurrence of trust, deception, along with the impact that the pervasive dissemination of ICTs have on the moral stance of human beings remain relevant and at the heart of contemporary debate in information and computer ethics. In this respect, the reader may find interesting Grodzinsky's, Miller's, and Wolf's, as well as Tavani's, and Vallor's contributions focusing on such topics.

Tavani's paper, *Levels of Trust in the Context of Machine Ethics*, contributes to the ongoing philosophical debate around artificial agents and their moral status, calling attention to the two prominent paradigms of thought currently existing. The article, which borrows from James Moor's (Moor 2006) conceptual framework of ethical agents, examines trust relationships between humans and artificial agents and dismantles more simplistic binary responses to the fundamental question, "Are trust relationships involving humans and artificial agents possible?". Instead, Tavani argues that trust relationships between humans and artificial agents are dependent upon an articulation of various levels of ethical agency that apply, or can potentially apply, to artificial agents. Through a series of examples, Tavani unpacks different variables and contexts around trust and humans compared to artificial agents. He summarily describes three significant variables: (i) autonomy (involving the individual artificial agents), (ii) risk/vulnerability (on the part of the human agents that placed their trust in artificial agents), and (iii) interactions (direct vs. indirect) between human agents and artificial agents. Tavani encourages much further research into the interplay between trust and agency/autonomy in the context of artificial agents.

Similarly, Grodzinsky's, Miller's, and Wolf's article, *Developing Automated Deceptions and the Impact on Trust*, focuses on the subject of artificial agents, theirs in the context of deception. The guiding questions, in this case, include what is deception? And under which circumstances, if ever, is it permissible for the developer of a computer artefact to use deception when creating computer artefacts? To examine these issues, the paper considers users, developers, and societies that are reliant on artificial agents and explores relationships of trust between and among them. Specifically, the paper is concerned with the occurrence of trust between developers of artificial agents and their users. Grounding the argument is the premise that deceptions induce disinformation and misperceptions; nonetheless, exceptions do and can occur, resulting in the possibility that deceptive artificial agents can be ethical. Ultimately, the authors conclude that developers have a professional, ethical, and societal responsibility to engage in the use of deception in tightly judicious ways. Justifying deception must be a professional norm and a policy priority.

Vallor's contribution is entitled *Moral Deskilling and Upskilling in a New Machine Age*: *Reflections on the Ambiguous Future of Character* and shifts the attention to the topic of technological deskilling, specifically the moral deskilling or reskilling that

accompanies such profound technological and societal changes as those brought about by ICTs. Vallor, relying on Aristotelian constructs of moral ability and skills, asserts that determining a moral skill depends on "if it is challenging to practice towards the right people, at the right times and places, and in the right manner, then it is a moral skill, not merely a reflex, attitude, belief or value". She argues that the importance of moral skills, which are intrinsic values, is paramount: if ICTs have the potential to disrupt the cultivation of moral skills, the future of human character may be profoundly affected, resulting in fundamental shifts in the fabric of the good life. As demonstrated by other papers in this issue, acute examples carry the reader through the ambiguities realized in the intersections of ICTs and contemporary information societies. The author sums her argument by stressing that our technologies are not only the subject and object of designers and users, for both collectively, societally, we have a duty to promote a global awareness of our roles and responsibilities as techno-moral artificers and artefacts.

Ethical analyses of the changes triggered by the information revolution also have a pivotal role in the debate on the policy and regulatory gap experienced by contemporary information societies. Insofar as such analyses prove to be a necessary, preliminary step to any effective attempt to fill such vacuum. The governance of information societies was, in fact, a central topic during CEPE 2013, which hosted a dedicated keynote, *The Governance of ICT-Driven Societies*: *On Law*, *Complexity*, *and Design*, and two panels relevant for this issue (*Governance and the Policies of Information*, and *The Onlife Initiative*: *Why Philosophy Matters to Policy*). The very same theme is also focal in this special issue, which includes three papers (Casanovas, Durante, and Pagallo) devoted to the subject.

Casanova's contribution, *Semantic Web Regulatory Models*: *Why Ethics Matter*, describes a method to model elements that refine the normative notion of law. To do so, the paper uses a *regulatory model*, in particular the author refers to Semantic Web Regulatory Models (SWRM) as to regulatory model that uses semantic technologies. This is a "specific normative suit encased by platforms built up to monitor a regulatory system, the specific structure of principles, values, norms and rules guiding technical protocols, multi-layered relation of organizations (multi-layered governance) and the interoperability of computer languages". The paper concludes that the validity of a norm is not sufficient in itself to determine its legality, thus highlighting the presence of some tension between the prescriptive dimension of regulations and the design of specific regulatory models.

In his article *The Democratic Governance of Information Societies. A Critique to the Theory of Stakeholders*, Durante critically assesses how the democratization of data brought about by the information revolution is redefining both the role of agents and our understanding of power in contemporary societies. It offers a criticism to the theory of stakeholder, one of the mainstream approaches to address such changes and discusses the tendency supported by this theory to extend the class of the political agents involved in the governance of the information society so to make it congruent with the one of social agents. The article maintains that social agents can be considered political agents only once they become *real interlocutors*, that is agents that "can participate in the formation of the political discourse" and of political decisions. The participation in the political discourse is, according to the author, the measure of the democratic nature of the governance of contemporary societies. Insofar as the mere extension of the class

of stakeholders does not grant political agency, it is only the inclusion of the stakeholder in the construction of the political discourse as real interlocutors that upgrade them from social to political agents. Durante concludes "it is thus the joint parameter of "information asymmetries and power differentials" that may provide us with an index of the impact of ICTs on the democratic process of governance, namely a process of governance that is expected to promote democracy".

Pagallo's contribution, *The Realignment of the Sources of the Law and their Meaning in an Information Society*, allows the reader to consider the radical shifts that ICTs have thrust upon societies, including significant infrastructural shifts that potentially undermine traditional legal structures. The article explores these shifts, dwelling upon such questions as "does the new scenario challenge basic pillars of the law, among which the sources of the system and its legal tools, or should we follow traditional outlooks, concluding that the information revolution neither affects nor modifies legal concepts? Moreover, is there any room for social norms and transnational law as new sources of the system, in addition to those of national and international law? And, how about the automation of the law? Does it challenge, or complete, the canonical mechanism of legal enforcement through the threat of physical sanctions?". By comparing contemporary geopolitical order to the Westphalia model, the paper argues that a third source—transnational law—should be added to the traditional two sources of the law, national and international, characterizing the Westphalian model. The normative shifts in legal structures and discourse are then considered, importantly calling attention to the ways in which traditional legal structures are now enhanced through mechanisms of design, codes, and architecture. The paper then concludes that "the traditional 'ought to' of legal commands is transferred to automatic techniques". In this respect, the reader should recall the other papers included in this issue, to consider the ways in which contemporary ICTs are continually forcing these tensions between and among normative structures, individual and societal autonomy, and technological determinism.

The interest toward the governance of information society arose during CEPE 2013 was quite timely given the historical circumstances in which the meeting was occurring. Just a few weeks before it, the world had become aware of a pervasive surveillance strategy endorsed by the US National Security Administration deploying the PRISM programme (https://www.eff.org/nsa-spying/timeline), which reinvigorated the debate on the balance between security and individual rights (Taddeo 2013), along with the value of privacy and anonymity (Hildebrandt 2013). The year before the meeting, 2012, the release of information about Operation Olympic Game, Stuxnet, and Flame[1], highlighted once more the need to fill the regulatory gap concerning the deployment of cyber-weapons and cyber-warfare (Floridi and Taddeo 2014; NATO Cooperative Cyber Defence Centre of Excellence 2013). Less than a year later from CEPE 2013, the decision of the European Court of Justice concerning the right to be forgotten[2] prompted another profound ethical discussion concerning the right to privacy, freedom of speech, and the regulation to access to data and information (Godwin 2003).

It is not a coincidence that between 2012 and 2013, the European Union, more specifically the Digital Agenda for Europe, had fostered the publication of the *Onlife*

[1] (http://www.theguardian.com/world/2012/jun/01/obama-sped-up-cyberattack-iran)
[2] (http://ec.europa.eu/justice/data-protection/files/factsheets/factsheet_data_protection_en.pdf)

Manifesto (Floridi 2014b). The manifesto summed up the purposes and the outcomes of the Onlife Initiative[3], a *European Union-funded project*, chaired by Luciano Floridi and including Stefana Broadbent, Nicole Dewandre, Charles Ess, Jean-Gabriel Ganascia, Mireille Hildebrandt, Yiannis Laouris, Claire Lobet-Maris, Sarah Oates, Ugo Pagallo, Judith Simon, May Thorseth, and Peter-Paul Verbeek.

The Onlife Initiative sought to explore through philosophical, legal, sociological, and regulatory mechanisms the transformations brought about through ICTs in contemporary information societies. Interestingly, the manifesto starts off identifying the topics of discussion in (i) the blurring of the distinction between reality and virtuality; (ii) the blurring of the distinctions between human, machine, and nature; (iii) the reversal from information scarcity to information abundance; and (iv) the shift from the primacy of entities to the primacy of interactions.[4] The interested reader may find insightful the commentary included in this issue authored by two of the participants in the Onlife Initiative, Judith Simon and Charles Ess, and describing both the methods and the outcomes of such a project.

The historical contingency, however, explains only in part the interest and the relevance of ethical analyses focusing on the governance of information society. Contemporary societies are growing at a fast and steady pace. They have been experiencing the changes and the novelties related to the information revolution for more that two decades and are now considering the way forward. Questions concerning the set of values and principles to be endorsed; the legal and regulatory structures to be embraced; and the ways to foster a plurality of views, transparency, and individual well-being along with social welfare reveal new pressing issues which, in turn, pose the need for ongoing ethical analyses as well as for interdisciplinary approaches to address such new problems. As the authors of the *Online Manifesto* put it, there is need "to launch an open debate on the impacts of the computational era on public spaces, politics and societal expectations toward policymaking […]. [It is time] to start a reflection on the way in which a hyperconnected world calls for rethinking the referential frameworks on which policies are built".[5]

The aim of this special is not to be representative of all the topics discussed during CEPE 2013, as the breadth and depth of the conference prevents from covering all of the relevant issues. The goals are rather to propose a set of insightful contributions tackling crucial problems concerning information societies and characterizing the debate in information and computer ethics, as well as to call the readers' attention on the complexity of contemporary societies vis-à-vis ICTs, with a particular focus on the debate on the governance of such societies.

Before leaving the reader to the articles included in this special issue, we would like to express our gratitude to all the authors who have participated in this project and to all the reviewers who collaborated throughout the selection process. We shall also extend our gratitude to the editor-in-chief of this journal for allowing us the opportunity of guest-edit this issue.

[3] (http://ec.europa.eu/digital-agenda/en/onlife-initiative)

[4] The reader interested in the Online Manifesto may find more details here http://ec.europa.eu/digital-agenda/en/onlife-manifesto.

[5] Page 3 of the version available at this link https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Manifesto.pdf.

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