Commentary: towards more responsibility in ICT

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Abstract

Purpose – The purpose of this article is to provide a commentary to the conceptual article by Norberto Patrignani and Diane Whitehouse, The Clean Side of Slow Tech. This article explores what can be easily overlooked in Information Communication Technology (ICT): the uncomfortable truth relating to the production, use and disposal of modern communication technology.

Design/methodology/approach – In it, the author picks up on the main ideas that were argued, specifically that there is a need to take a closer look at the production, use and disposal of modern communication technology.

Findings – Connecting resource production, use and disposal and its affect on climate change will require those who are in the position to make changes to come up with solutions that also consider values, beliefs and norms that lead to particular types of behaviour.

Research limitations/implications – ICT has had an enormous impact on people's lives. However, there has been primarily focus on its life-accelerating attributes. Slowing down the process of production may open up possibilities for sustainable ICT development.

Practical implications – The commentary, combined with Patrignani and Whitehouse's paper may provide a resource for those responsible in training future ICT professionals.

Social implications – If today's society, and this includes users and producers of ICT, intends to go beyond the mere rhetoric about sustainability, individuals will need to take on a new kind of responsibility that covers the entire life cycle of technology.

Originality/value – This commentary is intended to provide an additional viewpoint to the topic of sustainable ICT production.

Keywords Ethics, Sustainability, Slow Tech, Computer science

Paper type Viewpoint

This is a commentary to the conceptual article by Patrignani and Whitehouse: The Clean Side of Slow Tech that explores what can be easily overlooked in information communication technology (ICT): the uncomfortable truth relating to the production, use and disposal of modern communication technology. Within this commentary, I intend to build and extend on the argument that is being presented.

Most of today's developed and also in increasingly developing countries are occupied with the race towards an ever-improving ICT. The modern consumer society has been told how technological solutions will address the rising challenges that come with a world that is (still) growing in population. Consumer advertising feeds an appetite for more and more sophisticated goods and services, and globalisation and exploitative practice feeds off the price pressure. However, consumers in the developed world are increasingly coming to the realisation that this development comes at a price and is unsustainable. While the increasing

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sophistication in computer science and computer development leads to a lowering in energy consumption, however, it is unclear whether the energy consumption and saving totals are at a balance (Naumann *et al.*, 2011). In this article, the authors refer to the works of Meadows, Randers and Meadows (2004) and their book Limits to Growth. In their 30-year update, the authors highlight that people seem to have "profound faith in the powers of technology" (p. 203) and struggle to see that there are consequences and limitations in what can be achieved and for what price. They highlight that at times economists understand that technology "works automatically, without delay, at no cost, free of limits and produces only desirable outcomes" (p. 210). By now, we all know that this is not the case and the article "The Clean Side of Slow Tech" is reminding the reader of this specific to ICT.

However, technological development has been and is continuing to be a powerful force in the development of modern civilisation and, because of the growing exposure of society to ICT, it is ever more important to understand the implications of technology production and its disposal. Societies have known for some time that Earth's system is highly complex, sensitive and responsive to changes. In an effort to maintain a state of equilibrium, imbalances on one side come with consequences on the other.

While Patrignani and Whitehouse emphasise that this is a challenge to all of society they raise the issue what this means to those who are in the business of technology production. This is also a significant issue for researchers in the field of computer ethics. For example, Herkert (2005) writes that one of the problems is that much of the research devoted to dealing with computing and ethics focuses on a micro-level, that is, what happens between individuals who are involved in the processes of technological development and production. A macro-perspective, on the other hand, means that researchers need to broaden the context of ethical problem-solving. Melville (2010) highlights that those who are involved in ICT development are potentially in a prime position to shape people's ideas about the environment because the products of their development can support sustainability practices by focusing on environmental and economic performance.

Patrignani and Whitehouse highlight three areas of focus: production, use and disposal. Studies that explored "green" ICT have also looked at direct and indirect costs of ICT development including power usage and electronic waste. However, there are also aspects where ICT reduces environmental impact or optimises use of resources, but ICT has also an effect on people's lifestyles, which in turn can impact on the environment (Naumann *et al.*, 2011). The point that is being made is that information technology involves a wide range of complex products and processes that need to be considered in its life cycle analysis. Patrignani and Whitehouse argue that by adopting the concept of "Clean ICT" and focusing on the three aspects of production, use and disposal, the environment and human and animal welfare will benefit. However, there is not only a need to examine the environmental aspects but also social and human aspects to ICT production and use to adopt a sustainable position and transition towards more sustainability in ICT requires serious engagement with the ecological, social, ethical and economic dimensions of this technology.

The challenges to achieving such aims are complex and, while many countries have plans to work towards sustainable practices, striking a balance between

economical growth and use of resources is rarely being achieved (Al-Khouri, 2013). Al-Khouri raises, therefore, the question whether ICT products and their development and disposal are the cause or the solution to the problem of the deterioration of the environment we live in. He points out that ICT products are often short lived and that e-waste is toxic and frequently shipped out of sight. Those who argue that e-waste is projected to rise even further are confronted with arguments how ICT can help save money and create jobs. Al-Khouri stresses that responsible governments are needed who collaborate and communicate at the international and national level to implement thought through policies on ICT production, use and disposal.

Patrignani and Whitehouse, in discussing clean ICT, take a critical stance and raise questions addressing those issues, including also on whether the increasing evidence between the connections of resource production, use and disposal and its affect on climate change will require the research community to come up with solutions that are also achievable. Stern (2000) argued that this is only possible if research clarifies what can be defined as impact to make clear what actions can be taken that can and will make a difference. Stern uses a framework for analysis based on identifying values, beliefs and norms that then lead to particular types of behaviour and it may make sense to pick up the tenets from the clean ICT argument to explore what a framework such as Stern's can contribute. This may assist also in addressing the question raised on whether consumers will continue to accumulate materials goods. Daly (1996) asked this question some time ago and came to the conclusion that there is no such thing as sustainable growth because sustainable behaviour demands a reduction in the use of things and services so that, for instance, waste emissions do not exceed the assimilative capacity of the environment. He reminded us back then that the rhetoric of sustainable growth had to be changed, yet little has changed since the mid-1990s.

ICT has had an enormous impact on people's lives and on how it accelerates nearly all aspects of modernity from communication to production. So, it is interesting to read in this article the comparison being made to the idea of slowing down, likening it to the Slow Food trends that followed a fast, faster and fastest approach to cooking. Slow Food, synonymous to quality and the need to take time for the things that matter, may be a response to unsustainable lifestyles and superimposing this concept to ICT production, use and disposal is a timely message.

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