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Book section

Original citation:

Mansell, Robin (2014) Empowerment and/or disempowerment: the politics of digital media. Popular Communication: The International Journal of Media and Culture. ISSN 1540-5710 (Submitted)

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Available in LSE Research Online: August 2014

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Empowerment and Disempowerment: The Politics of Digital Media

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Revised and resubmitted 6 July 2014

Submitted to Special Issue on Technology and Empowerment, *Popular Communication: The International Journal of Media and Culture*

Word Count: 7,293

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Abstract

This paper examines prevailing institutional norms that are visible in international policy discourse concerning the goals of investing in digital technologies. An analysis of policy discourse associated with the World Summit on the Information Society shows how, despite the use of terms such as 'open' and 'participatory', the practice of ICT project implementation displays evidence of failures to empower local people. The discussion is framed by the lessons about asymmetrical institutionalized power from theories concerned with the dynamics of techno-economic change as contrasted with the prevailing market-led technology diffusion perspective. The context for the paper is the experience of contributing to a high-level policy report for UNESCO's 2013 review of progress towards knowledge societies. Examples drawn from digital technology applications are used to illustrate the asymmetrical power relations embedded in these developments.

Keywords: information society, knowledge societies, innovation, WSIS, diffusion, open development

Empowerment and/or Disempowerment: Politics of Digital Media

“Stimulating participatory initiatives, valuing diversity and giving individuals and local communities visibility and voice should be a very high priority. ... insufficient attention is given to what is necessary to ensure that applications of digital technologies are participatory in the sense that they are empowering for all those involved.” (UNESCO, 2013: 1.6)

Introduction

The opening quotation is from the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) conclusion to its WSIS+10 meeting in 2013. With ‘knowledge societies for peace and sustainable development’ as its theme, this meeting was one of many multi-stakeholder meetings charged with assessing progress towards goals set out in the World Summit on the Information Society (WSIS) Plan of Action in 2003. These meetings are also concerned with the contribution of digital media to meeting the Millennium Development Goals (MDGs) of 2000 and, specifically, with Goal 8F which aims to make the benefits of ICTs available,¹ in line with the MDG commitment to ‘spare no effort to free our fellow men, women and children from the abject and dehumanizing conditions of extreme poverty’. The UNESCO text signals empowerment and participation as central to the achievement of these goals. These terms, and others, such as voice and visibility, appear in numerous papers commissioned for these meetings. In contrast, terms such as disempowerment or, indeed, concepts such as asymmetrical power, are almost never present in the high-level policy discourse.

The context for the discussion in this paper was an invitation to prepare a report - *Renewing the Knowledge Societies Vision for Peace and Sustainable Development* - for the WSIS+10 meeting (Mansell and Tremblay, 2013). We took this opportunity to emphasize that ICTs can be empowering and / or disempowering depending upon the context in which these technologies are developed and applied. We argued that the interests of stakeholders are often in conflict and that the role of ICTs in societies is neither uniform, nor always beneficial. We

said that recognition of this by policy makers and digital media practitioners is an essential step in addressing the disempowering consequences of ICT investment when they occur. Some UNESCO officials said that our text was politically controversial, but the report was published by UNESCO in multiple languages. We succeeded in navigating the contested politics of UNESCO's interests in this area. We drew indirectly on a stream of research that confirms that the deployment of ICTs is always a political process involving contested power asymmetries that should be acknowledged if the outcomes of investment are to be empowering, on balance, for their users. There is much that we did not present in the report that would have gone further to substantiate our claims, but academic rationales rarely have a place in high-level policy reports. This paper offers an explicit articulation of the position we sought to present.

Insofar as the prevailing discourse in policy debate rarely acknowledges the contested power relations among those involved in ICT investment initiatives aimed at poverty reduction, it is important to ask what, if any, movement there has been towards the goals signaled by this paper's opening quotation. With the passage of time and the spread of digital media and other ICTs, including mobile phones, the internet and, especially, open source software applications, is there evidence of a discourse about institutional norms and practices that might help to resist the disempowering outcomes accompanying ICT investment? This paper highlights analytical frameworks that bring the potentially disempowering consequences of investment in ICTs into the foreground, contrasting these with models that occlude these consequences. The result of the latter is that digital technologies are depicted as inevitably, or at least predominantly, empowering, for disadvantaged people. The analysis is presented at the meso or institutional level in the spirit of contributing to the *Popular Communication* journal's goal of "theoretical pluralism" (Burkart et al., 2013).

The production of a multi-lateral, United Nations-sponsored discourse about ICT investment is arguably a key facet of the context in which specific digital media micro-level practices give rise to global, regional and local developments (Downing, 2013). Resistance to 'standard' discursive norms and practices is a

potential means of subverting asymmetrical power relations which have consequences for information and media-related practices at the micro-level. Instead of presenting detailed accounts of 'screen-based' digital technologies, the focus is on the dynamic in play at the global level of policy making and its related influence of ICT investment projects. Arguably, the WSIS process and its consequences are instances of the consolidation of the power of globalism and of efforts to manage and/or to suppress dissent where it occurs. These are deserving of analysis if the aim of research is to 'make submerged histories more explicit' and to focus on 'the intersection of popular communication, socio-political and economic change, and technological transformations' (Burkart et al., 2013: 1). In this paper, the focus is on institutional norms associated with the supply ICTs and on the practices that often occur before local populations have opportunities to 'domesticate' these technologies (Silverstone, 2005b).

The next section discusses the way UNESCO has positioned itself in the political discourse about how to meet the challenge of ensuring that ICTs are enabling, rather than disabling, for disadvantaged people. I then turn to a discussion of the prevailing theoretical models that are signposted in the discourse on the benefits of investing in ICTs and compare these with countervailing models that acknowledge that patterns of asymmetrical power embedded in institutions are crucial aspects of the technological innovation process. Taking the latter as a framework, I then consider examples of the way ICT investment initiatives can be regarded as being simultaneously empowering and disempowering, depending on the position of the assessor of the outcomes. In the conclusion, I reflect on the likelihood that the lessons of countervailing models will come to be better reflected in the high-level policy discourse on ICT investment.

Positioning UNESCO in the Political Discourse

As one of several United Nations agencies with a special interest in digital ICTs and media of all kinds, UNESCO is charged with, among other things, promoting freedom of expression and access to information. With a mission 'to contribute to the building of peace, the eradication of poverty, sustainable development and

intercultural dialogue through education, the sciences, culture, communication and information', it aims to encourage measures that will uphold fundamental human rights and enable people to acquire the 'necessary skills to produce and circulate information and engage with the media, and also to critically analyze and synthesize the information they receive' (Berger, 2009: 12). In brief, its mission is to encourage investment in ICT applications that will empower the disadvantaged.

At the time of the WSIS, UNESCO aimed explicitly to shift the ICT policy discourse away from a focus principally on market-led technology diffusion and the quantification of stocks of digital information. This approach was characteristic of other United Nations agencies such as the International Telecommunication Union and the United Nations Conference on Trade and Development and also of the World Bank. UNESCO instead favoured a vision of knowledge societies in which ICT investment was associated with education for all, community, sharing, linguistic diversity, digital solidarity, and participation. Its vision was set out in its World Report, *Towards Knowledge Societies* (UNESCO, 2005). The 'information society' is the prevailing label used to characterise societies that are increasingly dependent on digital ICTs. This was replaced by 'knowledge societies', explicitly signaling a plurality of pathways towards empowerment using digital technologies. Some years earlier the United Nations Commission for Science and Technology for Development (UNCTC) had employed a similar strategy but to relatively little effect insofar as there were few signs at that time of a shift in the discourse or in the institutional norms and practices in this area (Mansell and Wehn, 1998).

Almost a decade later and with the momentum created by a high-level world summit, UNESCO had another chance to position knowledge, indeed, multiple knowledges, as being crucial for contesting asymmetrical power relations that are embedded in the digitally-mediated environment. It aligned itself with human development as a process of 'enlarging people's choices ... to enjoy long, healthy and creative lives', following the capabilities approach of Amartya Sen that had been articulated in the 1980s (Sen, 1999; UNDP, 1990: 1). It insisted

that ICTs may have the potential to enable people to participate actively in their societies, but that empowerment does not follow automatically from ICT investment. It questioned, rather than asserted, whether we might now 'have the means to achieve equal and universal access to knowledge, and genuine sharing?' (UNESCO, 2005: 27).

By 2013, however, at the WSIS+10 meeting, the plenary discourse seemed out of step with UNESCO's earlier vision of knowledge societies. Destabilizations associated with a world recession seem to have tipped UNESCO towards a discourse favouring market-led technology diffusion and commercial information exchange, rather than towards a discourse consistent with open sharing of individually (or corporately) owned information. The opening plenary of UNESCO's WSIS+10 meeting, for example, confirmed the political salience of a market-led technology diffusion model. This model pays little, if any, attention to empirical evidence of the outcomes of the diffusion process except at an aggregate level when ICT penetration is benchmarked and associated with economic growth.

Professor Jeffrey Sachs presented the WSIS+10 keynote speech. Professor Sachs is Director of The Earth Institute, Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University. He serves as special advisor to the United Nations Secretary General who is responsible for leading the renewal of the MDGs. He put innovative advances in information processing, storage and transmission at the heart of his claim that only by becoming part of 'Moore's economy'² is it possible to achieve economic progress. He argued that investment in ICTs enables all countries to leapfrog earlier technology and to ensure that digital applications yield inclusion in the 'knowledge society' and economic growth. Although other plenary speakers commented on avoiding a replication of social and economic inequalities, the emphasis was on using digital media and other ICTs to position countries and companies to compete successfully in the global economy.

The United Nations High Level Panel on Information and Communication Technologies, had earlier argued that empowerment necessarily follows from investment in ICTs (United Nations, 2000b). The G-8 Digital Opportunities Task Force (Digital Opportunities Task Force, 2002) on 'e-development' was also apparently informed by this model of technology diffusion, insisting on the overwhelming empowering potential of ICT innovations. Viewing ICT investment as a potential equalizer, the prevailing discourse before the WSIS focused on removing obstacles to the spread of digital technologies. In the WSIS+10 plenary discourse there was little evidence of change, notwithstanding the occasional use of terms such as participation, equity and inclusion.

The WSIS Declaration of Principles stated that 'we are resolute to empower the poor, particularly those living in remote, rural and marginalized urban areas, to access information and to use ICTs as a tool to support their efforts to lift themselves out of poverty' (UN/ITU, 2003a: 1.4). The term empowerment was employed multiple times in this and other high level documentation. Since then policy related accounts of progress towards knowledge societies consistently has emphasized the 'urgency' of finding ways to achieve the ideals embraced by the WSIS principles (UN ECOSOC, 2012; UNESCO, 2010). Yet the political discourse about ICT investment, by 2013, continued to be informed mainly by an unproblematized view that 'transformation in information and communication has empowered individuals, enabled economic growth and contributed towards achieving the Millennium Development Goals (MDGs)', as stated in the conclusions to the WSIS+10 meeting (UNESCO, 2013: 1). It was acknowledged that access to information and knowledge is neither universal nor equitable, but in its role as host for the WSIS+10 meeting, UNESCO invited plenary speakers who privileged the empowering outcomes of ICT initiatives, rather than those who might have questioned the premises and evidence upon which such claims rest.

Despite the fact that relatively little is known about institutional and policy designs that would favour norms and practices consistent with empowering individuals and groups through their use of digital ICTs (Hess, 2012; Mansell,

2014 under review), there is empirical evidence that institutional and policy strategies that aim at 'open development', which expressly tackle asymmetrical power relations can be promoted to mitigate the disempowering features of ICT investment. Nevertheless, the prevailing policy discourse consistently fails to acknowledge power asymmetries. The empirical issue is whether there are signs in policy and practice of new institutional norms that reflect efforts to counter or avert disempowering outcomes. In the next section I consider how the prevailing market-led technology diffusion model's notion of the automaticity of ICT outcomes is sustained theoretically and how it is challenged from the perspective of a closely allied, but more nuanced theoretical tradition. This latter tradition may not be familiar to sociologists and many media and communication scholars because it is principally located in the economics discipline. Nonetheless, it theorises ICT investment in a way that offers insight into the contested politics of high-level ICT policies and practices in a way that complements research which focuses on the micro-analytical level.

Prevailing and Countervailing Models

The market-led technology diffusion model is consistent with the prevailing discourse on the emergence of 'informational capitalism' (Castells, 1996). It focuses on the impacts of ICT investment in economies that are relying increasingly on the commercialization of digital information. The dominant discourse is informed by theories about the impact of the growing economic salience of immaterial transactions in the economy (Helpman, 1998; Lipsey et al., 2005; Romer, 1994; Shapiro and Varian, 1998; Stiglitz, 1999). In these models, information in codified form, circulating through global networks, is the equivalent of empowering knowledge. It is assumed to be uniformly responsive to the needs of the companies, governments, and citizens. This model is the basis of the Sachs discourse discussed above. Gaps or divides in terms of access to ICTs, or indeed, to digital media and information, are seen as the outcomes of technology investment strategies. Such gaps are regarded as the result of an early stage on the ICT diffusion curve. The core strategy for ameliorating them is further investment to move along the diffusion curve. These models are

informed by a concept of digitally encoded information that gives no attention to the role of tacit, personal or situated knowledge (Cowan and Foray, 1997; Steinmueller, 2000), that is, which takes no account of variations in the interpretations of media content or information.

The observation that rapid innovation in ICTs and in the informational environment has destabilizing and potentially disempowering consequences is, in contrast, acknowledged by a closely related, albeit still economics oriented, branch of scholarship. In the mainstream economics model of informational economies, destabilizations associated with technological innovation are regarded as being straightforwardly beneficial or 'empowering', at least ultimately so in the long run. This perspective misreads or ignores several decades of research showing that the results of technological innovation are neither linear nor predictable. Theory and empirical research in the countervailing techno-economic change tradition, across a range of technologies and industries, shows that certain classes of technologies are destabilizing, but also that this is an unpredictable process, not the least because institutional contexts matter. In this second tradition, despite its roots in the economics tradition, it follows that innovations in ICTs are bound to work themselves out in complex ways and that these may be empowering and / or disempowering for their users (Freeman and Louça, 2001; Manyozo, 2012). Indeed, while ICTs are disruptive General Purpose Technologies (GPTs) (Bresnahan and Trajtenberg, 1995), the outcomes of the innovation process cannot be assumed to yield economic growth, reductions in power asymmetries, or the empowerment of disadvantaged groups, at least not in any simple way.

Research in the techno-economic change tradition focuses on the complex dynamics of technological innovation. It emphasizes that it is at the intersections where ICT-enabled codified information is coupled with tacit or experiential knowledge that asymmetrical power relationships work themselves out. Whether empowering knowledge emerges as a result of people's digitally mediated interactions is understood, therefore, to depend on a host of non-technical factors. In the techno-economic theoretical framework, institutional

norms and practices are understood to condition the way tacit knowledge is combined with codified information. If digital information is to be transformed into useful (empowering) knowledge, then the meaning of that tacit knowledge is crucial and it is always contextual (Cohendet and Steinmueller, 2000). Those championing the market-led technology innovation model elect to focus mainly on the impacts of ICT innovation on codified information, thereby neglecting rich insights about tacit knowledge that are central to this theoretical tradition. This body of work, nevertheless, articulates a much more ambiguous account of the likely outcomes of ICT investment than is reflected in the discourse informing high-level policy debate on the empowering potential of ICT.

In empirical studies of techno-economic change, attention is given to the institutional norms and practices that shape or guide outcomes. For example, Freeman and Perez insist that the outcomes of investment in ICTs are shaped by 'guiding principles' or common sense practices (Freeman, 1992; Freeman and Perez, 1988). They set out principles that have parallels, for instance, with Hess and Ostrom's (2007) account of institutional 'design principles' which they argue are essential to underpin empowering forms of citizen-inspired action. Understanding these principles and putting them into practice through policy implementation is understood to require attention, not only to investment in technologies (whether the Internet or mobile phones) and in the production and consumption of digital (codified) information, but to tacit or contextual knowledge and the processes of meaning construction, as well as to the power dynamics operating in the contexts in which knowledge accumulation takes place.

Thus, central to theoretical models that gave birth to concerns about the destabilizing features of technological innovation in the digital age, there is a clear recognition that digital technologies are not the elixir for the empowerment of the disadvantaged that the discourse employed in policy reports in this area would suggest. In both Freeman's work on techno-economic change and Hess and Ostrom's work on the institutional arrangements that have been found to favour empowering institutional norms and practices, it is acknowledged that it

is necessary to explicitly refashion power relationships if they are to favour people's empowerment as the overriding outcome. It follows from both of these traditions that investment in ICTs may lead to no change in power asymmetries, to changes that are regressive or harmful, to changes that are experienced by participants as empowering, or, indeed, to a combination of these outcomes.

In the techno-economic tradition, additionally, there is frequently an emphasis on changes in the institutional norms and practices that emerge from learning processes involving an understanding of the reasons for the perceived successes and failures of innovative activities (Poel, 2013; Rothwell et al., 1974; van der Panne et al., 2003). There are often references to the way 'social technologies' come to be accepted as standard patterns of interaction, that is, as institutions that 'come to be regarded by the relevant social group as standard in a context' (Nelson and Sampat, 2001: 39-40). These patterns are understood to influence how people act and interact, especially where 'the effective coordination of interaction is key to accomplishment' of outcomes (Nelson and Sampat, 2001: 39-40). Insofar as effective coordination, in contrast to competition, requires attention to asymmetrical power relations, this tradition acknowledges that what may be perceived as a 'successful' or as a 'failed' technological innovation needs to be understood from the perspectives of the specific actors who are involved. Assessments of this kind must be sensitive to differences in cultural, social, political and economic contexts and, explicitly in the case of Freeman's work, to asymmetrical power relations.

Thus, whether the experience of individuals and groups as a result of investment in ICTs is empowering or disempowering, or a mix of both, depends upon the observer's position within a framework of institutional relationships. This theoretical perspective, despite its economic origins, gives rise to observations with strong affinities to micro or situated approaches that are characteristic of the sociologically informed field of science and technology studies (Bijker et al., 1987; MacKenzie, 1996). In both traditions, technological innovation in ICTs and the consequences for empowering or disempowering transformation, are treated as inherently political processes involving (inevitably) unequal relationships.

Whether the empowerment of those without visibility and voice or substantial resources to change their lives occurs overall is, in these frameworks, an open question.

Policy reports aimed at monitoring the take up of ICTs, nevertheless, repeatedly offer 'success' stories following from each renewed round of investment in line with the predominant market-led technology diffusion model. These reports do not consider why ICT projects are deemed to be 'successful' or for or by whom they have been deemed to be successful. In the case of reports produced by intergovernmental agencies, including UNESCO, on the status of knowledge societies, ostensibly apolitical descriptive accounts of the success of investments in digital media and other ICTs go unchallenged (Mansell, 2014). This consistently yields a one-sided policy discourse. It is this discourse that then informs the norms and practices that guide those with the power to shape further investments in ICTs. In the next section I consider several areas of ICT investment with an emphasis on instances of 'failure', so as to offer a counterpoint to the 'success' narratives. I reflect on instances of ICT investment projects where the prevailing institutional norms and practices or the patterns of 'social technologies' are not consistently deemed to have averted disempowering outcomes. This section draws on evidence collected and reviewed in the course of preparing the *Renewing the Vision of Knowledge Societies* report.

Institutionalised Norms and Practices For / Against Empowerment

Resistance to reflecting explicitly on how or for whom ICT investment is disempowering by organisations charged with promoting ICTs in the public and civil society sectors is explained partly by the way the pervasive discourse around 'open' or 'participatory' digital media platforms has been appropriated. For those for whom the understanding of the 'success' or 'failure' of projects is informed mainly by the market-led technology diffusion model, success in meeting narrowly prescribed goals is always deemed to be beneficial. For example, the institutional norms and practices associated with open source software-based social media sites are often assumed to be empowering simply

because of their technical affordances. Open social media platforms such as Ushahidi or OpenStreetMap are often depicted as giving rise unproblematically to empowering outcomes because they are designed and managed to facilitate empowering action. Nevertheless, even ICT investment initiatives such as these do 'fail' to enable people's empowerment. It is often very risky for local stakeholders to reflect explicitly on instances of their own disempowerment because most ICT initiatives rely on external financing and are enmeshed with the politics of the public, private and civil society institutions that are providing the funding.

The result is that both from 'below' and from 'above, there is a persistent neglect of the institutional norms and practices that are operating in the environments in which ICT investment occurs. This then gives rise to misreadings of the complex power relationships that are at work in the multifaceted contextual environments in which these investments occur. Recurring patterns of norms and practices that disempower are brushed away and profiles of 'successful' participatory engagement with ICTs are presented for the consumption of high-level policy makers, as in the case of the WSIS+10 deliberations. Examples drawn from a variety of ICT applications fields illustrate how this occlusion of power relationships is accomplished.

Crowdsourcing for Risk Assessment: In the case of the use of the internet, social media and mobile phones to support crowdsourcing, for example, the production and consumption of digital information, even when it is based on open principles, can be subverted by authoritative funding institutions that insist on specific norms for governing information management that render the collection of information and its application inconsistent with the needs of local populations. In too many instances, norms influencing the way information is managed are such that information cascades from experts to country officers, community leaders and then to local participants, as in the case of the use of mobile phone platforms to collect local information about environmental risks in villages in Brazil.³ Ostensibly empowering or 'successful' ICT projects can also result in information that is collected and organised using formats which cannot

be translated for local practical use. Information reporting categories are often pre-defined according to taxonomies that are inconsistent with the way local participants understand risk and danger, and with their personal or tacit knowledge of their own environments. The result is that, whatever the potentially empowering benefits of the codified digital information, these are diminished in the face of asymmetries of power and the imposition of institutional norms that disempower because they are not responsive to local contexts.

Disempowerment through Data Standard-Setting: There may of course be some empowering outcomes for some participants, but the fact that institutionalised norms and practices for software standards for collecting, processing and reporting digital information (e.g. coding or tagging standards) are usually devised by experts associated with the funding institutions and then applied regardless of context simply deepens existing power asymmetries. Even when open – in contrast to proprietary – technologies are employed, conventional authoritative institutional hierarchies of information management are often replicated, notwithstanding the participatory ideals and values embedded in the technologies. For example, the ideal of empowering technologies can be compromised by the resistance of authoritative institutions to establishing standards for linking data from diverse sources. This occurs in cases where researchers attempt to use open source digital visualization tools with data from their own research and data sets created by, for instance, the World Health Organisation (Powell et al., 2012). Such projects ‘fail’ when large organizations do not release their data because their standards are incompatible with those used by researchers and when the information is subject to the copyright protection rules that govern data handling standards.

Digital Platforms for Governing: Another area in which the discourse of openness, participation and empowerment is much in evidence is in the fields of e-government or e-democracy. Here, the empowerment of citizens through the application of digital technologies is expected to result in benefits in the form of enhanced government transparency and freedom of expression (Heeks and

Bailur, 2007). Yet e-government initiatives often 'fail' as a result of the reluctance of authorities to share information or due to political barriers to transparent policy deliberation. In addition, even when the institutional norms of openness are championed, typically, the norms associated with market-led innovation mean that cost-saving measures and the use of proprietary digital platforms negate the potential for empowerment of disadvantaged individuals and groups. If interactive open Web 2.0 platforms are also used as a means for amassing vast quantities of data that can be used for surveillance by authorities, the designation of ICT initiatives as 'successes' or 'failures' becomes even more politically charged. These kinds of ICT initiatives are often misaligned with offline decision making procedures and take little heed of the power asymmetries between government officials and citizens, resulting in potentially disempowering outcomes as is documented in cases from Estonia to Kenya (Mansell and Tremblay, 2013).

Digital Story Telling: Investment in mobile phones and digital cameras is used to enable video reporting or digital story telling for those whose voices would otherwise be neglected. Often depicted as a form of empowering citizen journalism or education, these initiatives are frequently heralded as having successful outcomes. While access to these technologies may give voice to the disadvantaged, such initiatives can be simultaneously disempowering for the participants. This is especially so when the norms governing the circulation of the information have negative consequences for their lives. This happens when, for example, the norms of information transparency are privileged over prevailing structures of inequality with the risk of disempowering consequences especially for children and women. For instance, civil society organisations have been known to provide the digital means for local individuals or groups to provide stories on topics such as sexual abuse or war crimes without establishing adequate norms for protecting anonymity and privacy or attending to the traceability of the information that is generated, as reported at a workshop on gender and ICTs in India (CITIGEN, 2012).

ICTs and Healthy Living: ICT investment to support health services is another field that is reported widely as an instance of the empowering potential of these technologies. Reports on ICT investment contain numerous ‘success’ stories about the use of mobile phones to support rural health workers or distant diagnosis and prescriptions by doctors. Here, issues of privacy and the right to control information are particularly acute. In this area the market-led diffusion model provides the framework for the designation of ‘success’ when investment is associated with aggregate improvements in the health of a given population. Though such initiatives may lead to improvements in the overall health of disadvantaged populations, institutional norms and practices may, nonetheless, disempower individuals at the same time. If attention, for instance, is not given to how the costs of e-health initiatives are borne by local organisations or to the quality of the codified digital information available to health workers, there will often be disempowering implications. In other instances, ICT initiatives displace resources available for training medical personnel and for hospitals when funding shifts to the novel ICT applications as in an initiative in Malawi. As Bloom et al. (Bloom et al., 2011) argue, too little attention is given to whether or not ICT health initiatives are cost-neutral and to how potentially empowering applications become embedded in the existing (disempowering) institutional norms and practices.

Conclusion

Access to digital information does not provide the foundation for transforming digital information into empowering knowledge automatically. It is always necessary to enable local people to define their information needs, to empower them to acquire resources for making sense of digitally-mediated environments, and for locating digital technologies in their everyday lives in empowering ways. A discussion of ICT investment initiatives deemed to have ‘failed’ by some of their participants confirms that there is no ‘one size fits all’ model for ICT investment in knowledge societies, as is assumed by proponents of the market- led technology diffusion model. Empowering outcomes cannot be taken for granted even when the discourse may suggest that ‘participation’ and ‘openness’

are central norms. This is because change is constructed out of asymmetrical local and external institutionalized norms or 'social technologies' that become embedded in the prevailing practices of using these technologies.

The policy discourse that insists on exclusively empowering outcomes of ICT investment overlooks or downplays those instances where asymmetries of power are replicated and remain entrenched. The one-sided perspective offered by the market-led technology innovation model which is echoed in high-level policy debates on the future of knowledge societies is inconsistent with empirical evidence from studies of the institutional or meso-level dynamics of techno-economic change. As Silverstone (2005a: 189) argued, digital 'mediation is a fundamentally dialectical notion which requires us to address the processes of communication as both institutionally and technologically driven and embedded'.

The ICT investment trajectory is always coupled with guiding institutional principles. These might be altered if they are acknowledged more explicitly in the high-level policy discourse. Answers to whether ICT investment is empowering and / or disempowering depend, in part, on the institutional norms embedded in an ICT application. They also depend, importantly, on how, and by whom, decisions about these norms and practices are made. I suggest that an improved understanding of the interpenetration of the empowering and disempowering outcomes of investment in ICTs requires a critical assessment of the guiding principles of the institutions involved in the contexts in which they are introduced. In this way, the research community can expose why the spread of participatory possibilities offered by digital technologies, all too frequently, coincides with a deterioration in participatory processes (Albornoz, 2013).

In our *Renewing the Knowledge Societies Vision for Peace and Sustainable Development* report, we suggested that it is feasible to foster knowledge societies that privilege empowering over disempowering institutional norms and practices so as to avert 'failures' as perceived by the disadvantaged. To do so, however, will require that policy makers acknowledge that there is no necessary

relationship between the diffusion of technologies and poverty reduction. Willems (2014 in press) insists that when power asymmetries persist, the research community has an obligation to explain how these emerge and how they are replicated. This paper provides illustrations of why this is so in cases of ICT investment aimed at building knowledge societies.

It also suggests that the critical research community needs to guard against being captivated by claims about the empowering potential embedded within ICTs, for example, open source software or peer-to-peer networks. It is essential to examine occasions when 'open' guiding principles or institutional norms for digital platforms, software and content are subverted as a result of meso-level institutional norms. Digital networks and access to digital information are frequently presented as supporting freedom of expression, democracy and political transparency, more effective responses to humanitarian crises, and renewed efforts to tackle climate change, health or education, to list only a few. In practice, the digital media and other ICTs supporting these applications may empower people, but, simultaneously, they can be disempowering because of the institutional norms and practices that govern how such initiatives are managed.

A willingness to acknowledge that digitally-mediated knowledge societies are neither uniform, nor always empowering, is a necessary step in mobilizing changes in the institutional norms and practices that disempower. Gripsrud (2010: 16) points out that research assuming the unproblematic beneficial impacts of technological innovation is typically privileged over 'critical studies of how digital technologies relate to society as a whole —its social structures and processes'. Yet, it is the latter research tradition that acknowledges that 'the effectiveness of new media technologies to bring about social change is highly contested' (Wasserman, 2011: 147). That being so, a key challenge is, as he argues in his examination of the way mobile phones become political platforms, to link micro-level approaches to studies of political and economic contexts. The simple lesson that technological innovation is never entirely benign is perhaps the most challenging one policy makers and for the political project of

promoting investment in digital media and other ICTs in ways that are principally empowering for their users, rather than disempowering.

Funding Disclosure

Some of the research for this paper was undertaken under UNESCO Contract No. 4500191446. UNESCO bears no responsibility for the content of this paper or the views expressed herein.

Acknowledgements

The author of this paper is very grateful to all those who contributed materials used in this paper. Collaboration with Professor Gaëtan Tremblay in preparing the *Renewing the Knowledge Societies Vision for Peace and Sustainable Development* report was very important in shaping the argument in this paper but neither he, nor anyone else, bears responsibility for this paper.

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Notes

¹ WSIS refers to the Summit in Geneva 2003 and Tunis 2005 (UN/ITU, 2003b). See (United Nations, 2000a: Res. 55/2) and Goal 8F

<http://www.un.org/millenniumgoals/global.shtml>.

² The prediction in 1965 by Gordon Moore that the data density on integrated circuits would double approximately every 18 months supporting faster information processing.

³ Personal communication, Dr. Pollyanna Ruiz, LSE, Nov. 2012.