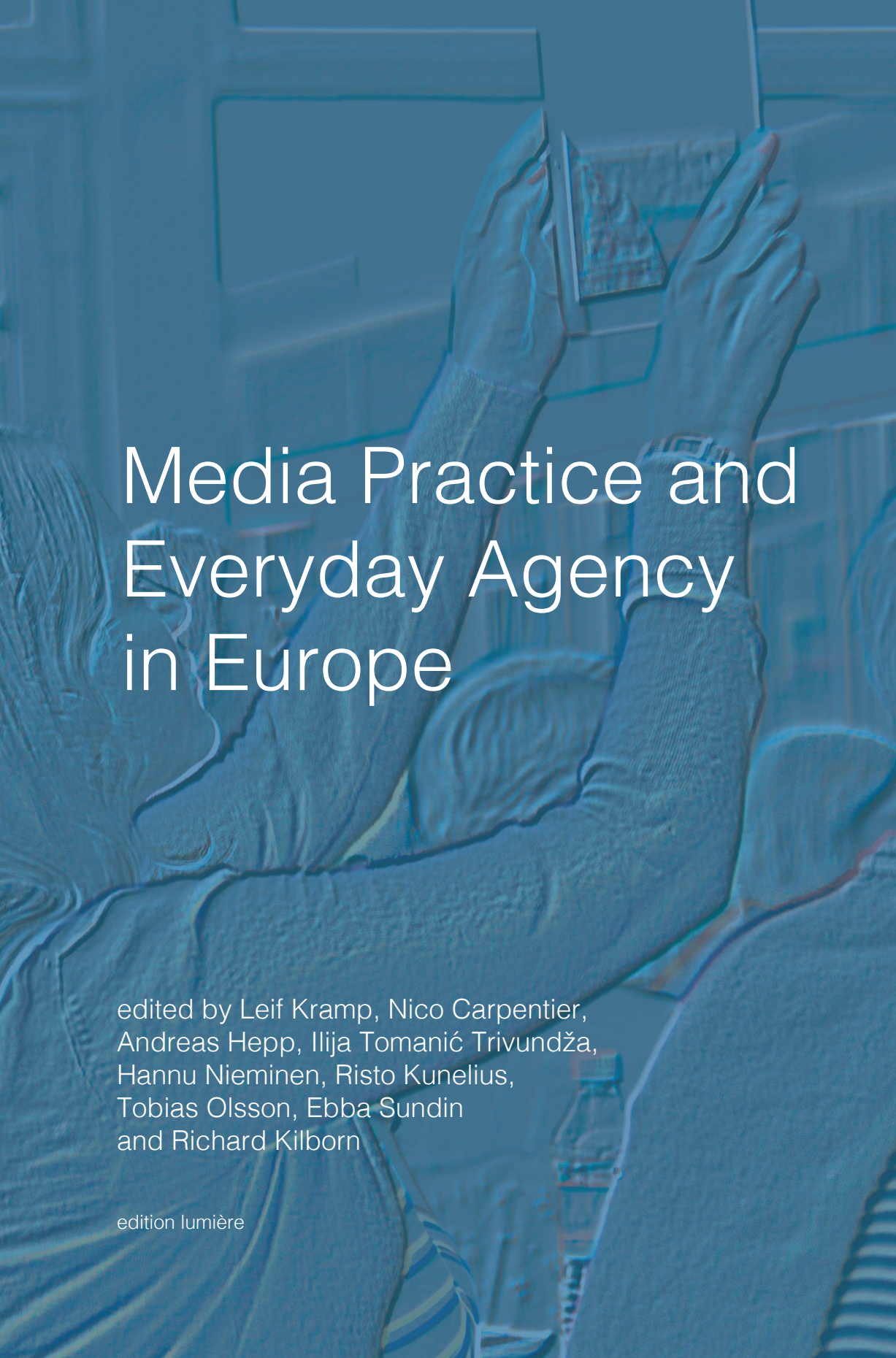

Media Practice and Everyday Agency in Europe

edited by Leif Kramp, Nico Carpentier, Andreas Hepp, Ilija Tomanić Trivundža, Hannu Nieminen, Risto Kunelius, Tobias Olsson, Ebba Sundin and Richard Kilborn

edition lumière

Table of Contents

SECTION 2: Transformations

SECTION 3: Methods

SECTION 4: The Social

PART 2
The European Media and Communication Doctoral Summer School 2013 and its Participants

Imagining Alternative Agency in Techno-Society: Outlining the Basis of Critical Technology Education

Minna Saariketo

The habitat in the Western world is defined by ubiquitous technology. Over the past thirty years, the practices of everyday life have become increasingly infused with and mediated by software. Databases, water, electricity and banking services, household appliances, media usage, health care, shopping, travelling and transport all rely on digital code (Kitchin/Dodge, 2011: vii, 3.). Furthermore, digital and networked mobile devices have in recent years become an inseparable part of people's lives especially in the Western world. Smart phones, tablets, navigators and other devices are carried along and used daily by an increasing number of people. For example in Finland, according to a recent survey, almost two thirds of Finns have a smart phone (Digitoday, 2013) and almost every Finn under 45 years old uses the internet (Suomen virallinen tilasto, 2012). Computerisation and softwarisation (Manovich, 2013: 5) keep expanding in more and more imaginative ways into new areas. We live literally in a techno-environment.

The changes in people's everyday technological environment have set new challenges for media education. Agency is chosen as a central concept to discuss these challenges in this chapter, even though the anthropocentric understanding of agency has been contested within critical technology studies. By concentrating on agency, it is possible to look at how an individual's action and its conditions have been and can be understood within media education. The concept of agency also seems to capture the most essential hopes and fears of a technologically mediated society. In general, by agency I refer to the capacity of individuals for independent and free choice (Carpentier, 2012: 6).

This chapter explores how the questions of agency and changing technological society have been tackled in media education. The notion of critical technology education is introduced as a way to discuss technology's role in societies and in people's everyday lives as part of media education. It is suggested that critical technology education is needed to provide tools to imagine alternative agency in a society of ubiquitous technology-mediation.

Saariketo, M. (2014) 'Imagining Alternative Agency in Techno-Society. Outlining the Basis of Critical Technology Education', pp. 129-138 in L. Kramp/N. Carpentier/A. Hepp/I. Tomanić Trivundža/H. Nieminen/R. Kunelius/T. Olsson/E. Sundin/R. Kilborn (eds.) *Media Practice and Everyday Agency in Europe*. Bremen: edition lumière.

1. Media and digital literacy fostering agency in the changing society

Over recent decades, media education has become more visible and prominent as a pedagogic practice and an academic field, generating experimental studies, policies and debates. There are various approaches, some of which are in discord with each other: some voices stress the need to protect children and youth from the dangers of media, while others emphasise the positive aspects of mediated experiences, pleasures, self-expression and participation. Yet another discourse suggests that a basic level of media skills is civics in our society as well as a necessary step in gaining access to employment.

The concept of media literacy is used when the outcomes of the media education process are described. This process is understood as a set of competencies that enables us to interpret media texts and institutions, to recognise and engage with the social and political influence of media in everyday life, and to produce our own media texts (Hoechsmann/Poyntz, 2012: 1). According to the current, widely shared skills-based definition, media literacy includes the ability to access and use, understand and analyse, evaluate and critically assess media, as well as to create content (Borg/Lauri, 2011; Erstad 2010; Livingstone, 2004; see also Ofcom 2004).

Media education and media literacy have been and continue to be in constant flux, and they are changing in step with technological development. Openness and engagement with evolving circles has been considered the very culture of practice to which media education adheres (Hoechsmann/Poyntz, 2012: 9). In the late 1980s and 1990s, media education focused primarily on the power and influence of the broadcast media and on questions about what was being communicated (the texts), by whom (the media industry) and for whom (the audience) (Hoechsmann/Poyntz, 2012: 2-3). In recent decades, media education has been preoccupied with active citizenship, youth empowerment and fostering skills that support participation in society. This emphasis ties in with the development in technologies. Media educators have widely celebrated the new experiences of agency enabled by increased access to technologies, possibilities of participation, collaboration and co-operation, forms of cultural expression that were previously unimaginable, the opportunities of nurturing silenced voices that otherwise go unheard and the promises of meaningfulness that new media brings to learning environments (see e.g. Hoechsmann/Poyntz 2012; Lankshear/Knobel 2008; Suoranta/Vadén, 2008). Furthermore, it is believed that new digital technologies also enable sharing, production and distribution in new ways for amateur users, creating ethically empowering possibilities (Kupiainen/Sintonen, 2010: 65). In other words, in mainstream media education, it is thought that technological innovations open new possibilities of agency for individuals and all of society.

The question of what kind of media education is needed in a digital age has been answered by introducing several new literacies, including digital literacy, ICT/computer literacy, information literacy, technological literacy, network literacy, e-literacy and game literacy. UNESCO has adopted the term "media and information literacy" to describe what they consider "an important prerequisite for fostering equitable access to information and knowledge and building inclusive knowledge societies" (UNESCO, 2011).

In this chapter, I take a closer look at digital literacy, which subsumes a number of other literacies mentioned above and is widely adopted in the language of research and policy making. The concept of digital literacy has been defined with varying emphases by scholars, school authorities, information society strategists and ICT companies since 1990s. The concept was introduced in a book entitled Digital Literacy (Gilster, 1997). It was regarded simply as literacy in the digital age and is therefore the current form of the traditional idea of literacy per se, that is, the ability to read, write and otherwise deal with information using the technologies and formats of the time (Bawden, 2008: 18). In a European Union digital literacy project, DigEuLit, digital literacy was defined as

> the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesise digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process (Martin, 2005: 135-136).

Buckingham (2008) has identified three approaches that have dominated understandings of digital literacy. First, it has been understood as an extension to computer literacy. This is essentially a functional definition and does not go far beyond specifying skills that are required to undertake particular operations. The second approach is in relation to online safety, including educating youngsters to protect themselves against harmful content, being more aware of the risks of online encounters, and discouraging them from harassing one another online. Third, Buckingham takes notice of how most discussions on digital literacy remain primarily preoccupied with information, and therefore tend to neglect some of the broader cultural uses of the internet. The focus has been on improving information searching skills and providing guidance on evaluating the relevance of online sources. As Buckingham points out, there is little recognition here of the symbolic or persuasive aspects of digital media, of the emotional dimensions of its uses and interpretations, or aspects of digital media that exceed mere information (Buckingham, 2008: 76-77). Bawden (2008: 28) has contributed to the criticisms of understanding digital literacy by adding that it is not sensible to suggest that one specific model of digital

literacy will be appropriate for all people and that it would suit different phases in life. He agrees with Martin (2006 in Bawden, 2008; 28) that digital literacy is "a condition, not a threshold".

Even with these reservations to the understandings to digital literacy, I perceive that something essential is missing. If digital literacy really is considered as a survival skill in the digital era (e.g. Eshet-Alkalai, 2004) and digital agency something to be fostered, it needs to be complemented with an understanding of how the digital society functions and whose interests steer it. Next, I will take a closer look at the increasingly code-based nature of contemporary digitalised society.

2. Agency in the society of software-supported infrastructures

Discussions of post-industrial society, the information society, and the network society have all been ways of attempting to understand how social change is inseparable from technological development (Thacker, 2004: xii). Increasingly, the discourse of digital futures is used as proof that we have changed, socially and culturally, and the idea of technological revolution has become normative (Hoechsmann/Poyntz, 2012: 143).

Manovich (2013: 33, 39), among other scholars in the field of software studies, has contended that we live in a software society – that is, in a society where the production, distribution, and reception of most content is mediated by software. Software, in the shape of embedded algorithmic systems and protocols, is now so widespread that we can no longer be sure of its exact extent (Thrift/French, 2002: 320). Manovich (2013: 21) has compared software to combustion engines and electricity in term of its social effects, Thrift and French (2002: 330) juxtaposed it with ubiquitous small but crucial technologies that go largely unnoticed such as pencil and screw, and Kitchin and Dodge (2011: 3) stated that it has become the lifeblood of today's emerging information society in the same way as steam was at the start of the industrial age.

Yet, aspects other than the use of software-enabled devices are rarely discussed within media and digital literacy studies and related practices. With the development of technologies, media education is ever more occupied with young people's agency and empowerment, but it seems that the conditions of agency in the digital age cannot be understood without taking the code-based structural affordances into account. If we limit our discussion of digital culture to the notions of networks, social media, participatory culture and peer production, it is not possible to grasp what is behind the new representational and communication media. If software itself is not addressed, there is a danger of

always dealing only with the output that appears on a computer screen rather than the programmes and social cultures that afford, that is, enable and shape, the outputs (Manovich, 2013: 9).

Software is deeply woven into contemporary life, economically, culturally, creatively and politically, yet it very often goes unnoticed. In fact, it seems that it is precisely because software has come to intervene in nearly all aspects of everyday life that it has begun to sink into a taken-for-granted background of everyday life (Thrift/French, 2002: 309.) Thrift and French (ibid: 311) have identified four reasons for what they call the "absent presence" of software in society. First, software is easily ignored because it takes up little physical space, and generally occupies micro-spaces. Second, software is deferred, and it expresses the co-presence of different times. Third, software is a space that is constantly in-between. Last, and most importantly with regards to media education, we are schooled in ignoring software, in the same way we are schooled in ignoring standards and classifications (Bowker/Star, 1999).

Thus, the techno-structures have become invisible in drastically new ways, and the increasingly computerised production of space becomes automatic as people accommodate the use of new technologies as part of their everyday routines (Ridell, 2010: 12). They are no longer perceivable in the same way analogic (media) technological infrastructures (phone lines and electric cables etc.) were. Simultaneously, technologically mediated power relations are more difficult to see. In general code, the set of procedures, actions and practices designed to achieve particular ends (Thacker, 2004: xii), is inside machines and hidden. Yet, as Kitchin and Dogde (2011: 3-4) emphasise, the effects it produces are both visible and tangible. Thrift and French (2002: 312) for their part, point out that software is a dimension of the technological unconscious – a means of sustaining presence which we cannot access but which clearly has effects (see also Beer, 2009).

The software-enabled web architecture sets conditions for how people communicate, interact and act online in general and on social network sites (SNSs) in particular, that is, in spaces that have been theorised to create a new participatory architecture (O'Reilly, 2005) which hosts the new participatory culture (Jenkins, 2006). With all the excitement about the new virtual public sphere (Papacharissi, 2002), media literacy scholars have paid little attention to the technical mediation and affordances of SNSs. The presumption that new networked technologies lead to enhanced involvement of users and active cultural citizenship ignores the substantial role that a site's interface plays in manoeuvring individual users and communities (Dijck, 2009: 45). The political economic perspective, with reflections on the governance and power in the Web 2.0 (e.g. Fuchs, 2009; Terranova, 2004), has been bypassed many times. Many of the platforms enabling participatory culture and active citizenship are automated, commercial systems which aim to commoditise the activities

they host. To make apparent how the social network sites function in terms of shaping user agency, José van Dijck (2013: 12) wants to replace the term social media with connective media. In her view (ibid.: 23), the latter notion exposes the profit-driven automated logic of the SNSs and helps to elucidate how these online platforms have become central forces in the construction of human sociality, not merely hosting it. Moreover, the notion of connective media directs attention to how owners and users are both helping to shape and being themselves shaped by this construction. She emphasises that the same algorithms that aim to offer a "frictionless online experience" also make the same experience manipulable and saleable as data is collected and sold and code-based mechanisms steer users of SNSs towards particular companies and products (ibid.: 157).

Media educational discussions of active (technologically mediated) citizenship have thus far ignored the influence of software-sustained structures on agency, and there is little reflection on the relationship between these structures and our abilities to influence, shape and take action in the world. The internet is not free from economical and sociocultural power relations nor is it a sphere for any types of agency. The internet is a material structure affording the forms of agency that are possible in network environments (compare McLuhan, 1964). As Giddens (1984) has argued, questions of structure are not separate from questions of human agency, and they need to be understood in terms of interdependence (Parker, 2000). Critical technology education, presented next, will suggest how these issues could be tackled in the contemporary condition.

3. Critical technology education: A means to foster alternative agency

Manovich (2013: 4) asks in Software takes command what happens to the idea of a medium after previously media-specific tools have been simulated and extended in software. Is it still meaningful to talk about different mediums? These questions can be extended by asking how this affects media education and what it should be like in a digital (software) society.

I suggest media education be expanded via an approach that can be called critical technology education. By education I refer to fostering thinking and opening new ideas, not just for children and youngsters, as is often the case in media education, but for all ages. The object of the education, technology, refers to the need to understand the often inconspicuous ways in which technology shapes and conditions societies as well as plays a crucial infrastructural role in people's everyday lives. Given that software has taken on the status of background (Thrift/French, 2002: 312), special attention needs to be directed to understanding how it works in enabling and constraining agency. Software

should therefore be made the focus rather than just the enabled technologies or the uses they are put to (Kitchin/Dogde, 2011: 3). Furthermore, to understand the power relations in digital society, it is not enough to only consider how technology works, but also whom it works for (Thacker, 2004: xii). In other words, critical technology education is much broader than just the skills of using devices, programming or writing code. Critical is needed as an attribute, because technology education has long been part of the curricula. Its aim has been to make the processes and knowledge related to technology familiar, but it has been mostly preoccupied with indirectly making people conform to the demands of new technologies. Moreover, in the name of national economic competitiveness, young people have been equipped with the skills and knowledge to be a productive workforce. All in all, critical orientation enables an alternative view and also a means of relating differently to our technologies (See also Petrina, 2000).

Joshua Meyrowitz's (1999) three metaphors for media help to illustrate how critical technology education opens up a fresh perspective to media education. Until now, for the most part, the ways media have been addressed in media education, can be described with Meyrowitz's metaphors of medium-as-vessel/conduit and medium-as-language. In other words, media education has been looking at media either as holding or sending messages with the aim of developing skills in analysing media content, or it has focused on the unique range of expressive potential of each medium to understand particular grammar choices or production variables.

Critical technology education focuses on elements of Meyrowitz's third metaphor, medium-as-environment – an approach that has so far received scant if any attention within media education. In critical technology education, media and technology are perceived as active shapers and organisers of our perceptions and thinking, instead of taking them as pre-given external matters, devices that are simply used, or channels that convey information. Here, in a McLuhanian (1964) sense, media as technologies are taken as a starting point.

One of media education's aims has been to raise awareness of the diverse effects media have in people's lives. I agree with media anthropologist Elizabeth Bird (2003: 1) in that although people recognise the all-embracing impact of media in our society, they deny these impacts in their own lives. That holds for technology as well. Even if everyday life is saturated with technology, and in fact exactly because of it, it is difficult to perceive its impacts. By better understanding the technological nature of our society and the way software constitutes and shapes it, it is possible to imagine alternatives. Without the suggested understanding, one can only accept the ready-made devices and software applications with the limitations and value agendas built into them (Rushkoff, 2012). Critical technology education can provide us with a chance to reflect upon, challenge and resist the kind of oblivion that can blind

us to the possibility that things might be different. As Andrejevic (2009) has observed, despite technological developments, power relations remain largely unaltered. Critical technology education is needed to consider the ways in which the deployment of networked digital media contribute to and reinforce the contemporary exercise of power, and to imagine how it could be otherwise. This constitutes the grounds on which dreams of alternatives might be born (see also Hoechsmann/Poyntz, 2012: 197). In a Freirean (2000) sense, the aim of critical technology education is to nurture agency which not only survives and adapts to existing conditions, but seeks to influence them in providing a fairer and more equal society.

References

Andrejevic, M. (2009) 'Critical media studies 2.0: an interactive upgrade'. *Interactions: Studies in Communication and Culture* 1(1): 35-51.

Bawden, D. (2008) 'Origins and concepts of digital literacy', pp. 17-32 in C. Lankshear/M. Knobel (eds.) *Digital Literacies. Concepts, Policies and Practices*. New York: Peter Lang.

Beer. D. (2009) 'Power through the algorithm? Participatory web cultures and the technological unconscious'. *New Media & Society* 11(6): 985-1002.

Bird, S. E. (2003) *The Audience in Everyday Life*. New York: Routledge.

Borg, J./Lauri, M. A. (2011) 'A comparative study of EU documents on media literacy'. *Media Education Research Journal* 2(1): 30-42.

Bowker, G. C./Star, S. L. (1999) *Sorting Things Out. Classification and its Consequences*. Cambridge: The MIT Press.

Buckingham, D. (2008) 'Defining digital literacy. What do young people need to know about digital media?', pp. 73-89 in C. Lankshear/M. Knobel (eds.) *Digital Literacies. Concepts, Policies and Practices*. New York: Peter Lang.

Carpentier, N. (2012) 'Discursive structures in the network society. A theoretical case study on the role of immaterial structures in media organizations'. *Javnost - The Public* 19(4): 5-19.

Digitoday (2013) 'Älypuhelimet ponnistivat yli haamurajan Suomessa'. *Digitoday.fi*, 10.5.2013, http://www.digitoday.fi/mobiili/2013/05/10/lypuhelimet-ponnistivat-yli-haamurajan-suomessa/20136702/66.

Dijck, J. van (2009) 'Users like you? Theorizing agency in user-generated content'. *Media, Culture & Society* 31(1): 41-58.

Dijck, J. van (2013) *The Culture of Connectivity. A Critical History of Social Media*. Oxford: Oxford University Press.

Erstad, O. (2010) 'Media literacy and education. The past, present and future', pp. 15-27 in S. Kotilainen/S. Arnolds-Granlund (eds.) *Media Literacy Education. Nordic Perspectives*. Gothenburg: Nordicom.

Eshet-Alkalai, Y. (2004) 'Digital literacy: a conceptual framework for survival skills in the digital era'. *Journal of Educational Multimedia and Hypermedia* 13(1): 93-106.

Freire, P. (2000) *Pegagogy of the Oppressed*. New York: Continuum.

Fuchs, C. (2009) 'Information and communication technologies and society. A contribution to the critique of the political economy of the internet'. *European Journal of Communication* 24: 69-87.

Giddens, A. (1984) *The Constitution of Society. Outline of the Theory of Structuration*. Cambridge: Polity Press.

Gilster, P. (1997) *Digital Literacy*. New York: Wiley.
Hoechsmann, M./Poyntz, S. R. (2012) *Media Literacies. A Critical Introduction*. Chichester: Wiley-Blackwell.
Jenkins, H. (2006) 'Confronting the challenges of participatory culture: Media education for 21st century'. MacArthur Foundation, http://mitpress.mit.edu/sites/default/files/titles/free_download/9780262513623_Confronting_the_Challenges.pdf.
Kitchin, R./Dodge, M. (2011) *Code/Space. Software and Everyday Life*. Cambridge and London: The MIT Press.
Kupiainen, R./Sintonen, S. (2010) 'Media literacy as a focal practice', pp. 57-67 in S. Kotilainen/S. Arnolds-Granlund (eds.) *Media Literacy Education. Nordic Perspectives*. Gothenburg: Nordicom.
Lankshear, C./Knobel, M. (2008) 'Introduction: Digital literacies – concepts, policies, practices', pp.1-16 in C. Lankshear/M. Knobel (eds.) *Digital Literacies. Concepts, Policies and Practices*. New York: Peter Lang.
Manovich, L. (2013) *Software Takes Command*. New York et al.: Bloomsbury.
Martin, A. (2005) 'DigEuLit – a European Framework for Digital Literacy: a Progress Report'. *Journal of eLiteracy* 2(2): 130-136.
Martin, A. (2006) 'Literacies for the digital age', pp. 3-25 in A. Martin/D. Madigan (eds.) *Digital Literacies for Learning*. London: Facet Publishing.
McLuhan, M. (1964). *Understanding Media: the Extensions of Man*. New York: Signet.
Meyrowitz, J. (1999) 'Understandings of media'. *Et cetera* 56(1): 44-52.
O'Reilly, T. (2005) 'What is Web 2.0. Design patterns and business models for the next generation of software'. *Oreilly.com*, 30.9.2005, http://oreilly.com/web2/archive/what-is-web-20.html.
Ofcom (2004) 'Ofcom's Strategy and Priorities for the Promotion of Media Literacy. A Statement', http://stakeholders.ofcom.org.uk/binaries/consultations/strategymedialit/summary/strat_prior_statement.pdf.
Papacharissi, Z. (2002) 'The virtual sphere. The internet as a public sphere'. *New Media & Society* 4(1): 9-27.
Parker, J. (2000) *Structuration*. Buckingham: Open University Press.
Petrina, S. (2000) 'The politics of technological literacy'. *International Journal of Technology and Design Education* 10(2):181-206.
Ridell, S. (2010) 'The cybercity as a medium. Public living and agency in the digitally shaped urban space'. *IRIE – International Review of Information Ethics* 12(03): 11-19.
Rushkoff, D. (2012) 'Code literacy: A 21st-century requirement', http://www.edutopia.org/blog/code-literacy-21st-century-requirement-douglas-rushkoff.
Suomen virallinen tilasto (2012) 'Väestön tieto- ja viestintätekniikan käyttö', http://tilastokeskus.fi/til/sutivi/2012/sutivi_2012_2012-11-07_fi.pdf.
Suoranta, J./Vadén, T. (2008) 'Wikiworld. The Political Economy of Digital Literacy and the Promise of Paticipatory Media'. Copyleft, http://wikiworld.files.wordpress.com/2008/03/suoranta_vaden_wikiworld.pdf.
Terranova, T. (2004) *Network Culture. Politics of the Information Age*. London: Pluto Press.
Thacker, E. (2004) 'Foreword: Protocol is as protocol does', pp. xi-xxii in A. R. Galloway (ed.) *Protocol. How Control Exists After Decentralization*. Cambridge/London: MIT Press.
Thrift, N./French, S. (2002) 'The automatic production of space'. *Transactions of the Institute of British Geographers*, 27(3): 309-335.
UNESCO (2011) 'Media and Information Literacy', http://portal.UNESCO.org/ci/en/ev.php-URL_ID=15886&URL_DO=DO_TOPIC&URL_SECTION=201.html.

Biography

Minna Saariketo is a PhD student at the University of Tampere, Finland. Her research concerns agency in technologically mediated society, the discursive production of agency in different spheres and the ways of adopting agency in a digital society. The aim of her dissertation is to outline the basis of critical technology education which she considers as a crucial expansion and challenge to media education as it is currently understood. She has earlier worked as a media educator in a local newspaper and as a research assistant in a project interested in spaces of Web 2.0 as a public sphere.

Contact: minna.saariketo@uta.fi