Editorial
Digital Capitalism, Datafication, and Media Education: Critical Perspectives

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Introduction

One famous narrative of the internet is that it is a free and liberating space that has been invaded by big business. This narrative is as well-known as it is criticized for its over-simplification. Nonetheless, we can observe certain shifts within the infrastructure of the internet and other digital technologies: from open, interoperable protocols and formats to 'walled gardens' of social media platforms; from non-commercial sharing economies to profit-driven services; and from the web as a transnational structure to nationalized internets with location-specific services, restrictions and regulations.

As digitization and datafication continue to extend into all areas of society, digital capitalism becomes equally ubiquitous and universal. The aforementioned examples illustrate how economic and political interests are at work. These examples highlight some of the difficulties in the conceptualizations and practices of digitization. Digital capitalism,

and related phenomena such as data, surveillance or platform capitalism, operate on the basis of a comprehensive expropriation and exploitation of personal data profiles. It functionalizes life worlds and places of education to an unprecedented extent.

While we are facing new ways of dealing with quantitative dimensions of education, non-measurable dimensions of education as well as media critical perspectives are often neglected. Moreover, the limitations of mathematical languages and algorithmic rationality very often remain unnoticed as well.

Education, in this context, obviously plays a 'critical' role in an ambivalent sense. On the one hand, (media) education can be seen as an important countermeasure in raising people's awareness, as well as their levels of criticality and reflexivity. In this sense, educational work within media education corresponds with the critical analysis of digital capitalism and datafication, informing knowledge about contextual dimensions of big data as well as promoting facilitation of critical literacies, self-determination, enlightenment regarding the distribution of responsibility, solidarity with underprivileged groups and personal agency. On the other hand, education in many cases extends digital capitalist ideologies (cf. technical solutionism), tech services and practices to the development and utilization of human capital. Examples include large tech companies lobbying for their equipment, cloud-based services, datafied learning and automated learning systems in schools or HE, especially in the context of the emerging global education industry (GEI). Political and educational actors largely embrace these metrics-based solutions, as they promise an effective way of reducing complexity in formal education settings, but they may not always be aware of the implications of these systems.

What position/s can media education in research and application take to respond to these developments? Which theories, concepts and methods help to formulate adequate analytical, critical and transformative answers?

Overview

This special issue opens with **Horst Niesyto**'s theoretical essay on "Digital Capitalism and Critical Media Education". The author takes two of his previous writings about challenges for media education in light of developments in digital capitalism as a starting point. He points out affinities between capitalist and digital structural principles as well as related problems regarding structures of social inequality, power relations, processes that promote and endanger democracy, and influences of IT industries on education. In his conclusion, Niesyto argues for strengthening critical media education and promoting alternative pathways to the commercial offers that large IT corporations provide.

In the paper "Refocusing Zuboff's 'division of learning' on Education" **Jeremy Knox** examines how division can be understood through the distinction between learning *in* and learning *from* educational platforms. Knox uses Zuboff's work (2019) *The Age of Surveillance Capitalism: The fight for a human future at the new frontier of power* and

the term 'division of learning' to consider educational platform software. There is the distinction or division between those who use technologies and learn in educational platforms and those that own the platform software. Knox explains how Zuboff uses the term 'shadow text' to denote the body of data that is gathered from users, below the surface, unseen by the users but seen by the knowledge elite who derive insights into human behaviour. In the second part of his paper, Knox suggests that researchers and others need to engage in a purposive, political and emancipatory form of data science rather than calling for people to become experts in data science, which Zuboff appears to be doing.

In her paper "Critical is not political: the need to (re)politicize data literacy", **Fieke Jansen** takes a socio-political perspective towards critical data literacy. The author provides a thorough overview of recent approaches to (critical) data literacy and unpacks the assumptions that underly these redefinitions. Reflecting on years of experience in creating data literacy resources in the third sector, the author advances the argument that data literacy needs to be (re)politicized: both in terms of the competencies learners need to influence political processes and challenge existing power structures in datafied societies, and in terms of the assumed 'neutrality' of the data literacy concept itself. Throughout the article, Jansen underpins this argument by engaging with recent scholarly debates as well as reflecting on her own practical experience in the field, highlighting "blind spots" in recent data literacy concepts and suggesting concrete approaches for politicizing the practice of critical data literacy.

With the digitization and datafication of our societies, the term 'consent' has developed a new meaning, describing the click of an 'OK' or 'I agree' button, and constituting the legal necessity for using the digital ecosystem. In "A feminist critique to digital consent", **Elinor Carmi** analyses this new understanding of consent in the digital age and asks: "Who benefits from digital consent?". In search of an answer, the author analyses feminist understandings of consent, presenting a feminist critique of digital consent mechanisms and uncovering the power asymmetries that digital consent enables. The article identifies the current digital consent system as flawed and argues that cosmetic changes toward a more 'ethical' consent mechanism only strengthen this broken system. Finally, the article highlights the broader educational effects of digital consent, as it nudges people towards behaving with narrow agency and in ways that preserve asymmetric power relations.

While the research field Critical Data Studies has grown significantly in recent years, most studies in the field focus on social, cultural, political, and economic factors rather than technical dimensions of data systems. The article "Towards a Closer Look at the Pipes and Joints of Educational Data Infrastructures. A Technogenetic Analysis of the Experience API" by **Christoph Richter, Lars Raffel and Heidrun Allert** aims to broaden the analytic scope of Critical Data Studies in education by examining the technical dimension of emerging educational data infrastructures. As a case study, the authors examine the 'Experience Application Programming Interface', or xAPI, which has been developed to

support the recording, exchange, and retrieval of learning processes across digital educational platforms. Based on first-hand experience in implementing the xAPI, the authors unravel the social, historical and cultural assumptions and perspectives underlying educational technology standards like the xAPI and demonstrate the rather restricted idea of learning and education that such systems support.

Dan Verständig's paper on "Critical Data Studies and Data Science in Higher Education" gives a very useful introduction to the thematic field around data and algorithms: including various contexts; differentiated power relations; and inequalities within or through data practices. The author, then, presents and reflects upon a course project for Masters students in higher education. The course mainly addressed students from computer science and education and was based on problem-/project-based learning and a wider understanding of transformative learning. Students in the course acquired insights into a range of concepts from Critical Data Studies and data science, as well as skills in programming and the use of data retrieval and analytics tools. In the core of the course, a joint group project was conducted, accompanied by a steady process of discussion and reflection upon ethical aspects, power relations or team processes. While the paper is mostly based on personal considerations by the author, it provides valuable insights into a pedagogic approach to critical data literacy at the intersection of data science and media education in an interdisciplinary setting.

Xavier Giró Gràcia and Juana M. Sancho-Gil's paper "Artificial Intelligence in Education: Big Data, Black Boxes, and Technological Solutionism" provides a useful overview of the issues facing educators, policy makers and educational researchers in this field. They first introduce the concepts of big data, Artificial Intelligence, learning analytics and machine learning algorithms and then explain how they are deployed as 'black boxes'. They consider the possible impact on education that these developments can have. The paper then focuses on the underlying educational discourses that present information and communication technologies as a panacea for solving educational problems and suggest these are reductionist solutions to wicked problems. The authors point out the need to analyse not only the advantages of these technologies but also their possible negative effects. The paper concludes with a call for education on algorithms and the impact they can have on our lives.

In their paper on the "Global Education Industry", **Theo Hug and Reinhold Madritsch** explore the "state of affairs in Austria". Departing from general remarks on processes of economization and digitization in education, especially under pandemic conditions, the authors draw on Anthony Picciano's notion of the "educational-industrial complex" (EIC) as an analytical heuristic to investigate the development and status quo of digitization within the education system and educational politics. The concepts offer three dimensions – ideology, profit and technology – with which the authors shape their analysis. Their national case study encompasses material such as websites from public authorities, learning portals, business networks and marketing materials from commercial providers

for learning technology and content. The paper depicts and disentangles the interdependencies of public and commercial actors. The authors suggest that to counter the previously analysed networks within the EIC it is necessary to strengthen public responsibilities for partly outsourced sectors as well as the "ethics of the commons" (e.g. in using free software) and "digital sovereignty".

In the first part of the final paper by **Geir Haugsbakk**, he examines international debates on the influence of technology giants on educational policy. He provides a synopsis of contemporary research about edtech industries and the kinds of relations and networks that have been established since the early 1990s. In the second part of his paper, the author focuses on networks and channels of influence in a Norwegian context. The author comes to the conclusion that there are some similarities in terms of edtech dynamics in different countries, especially regarding a general level of how digital technologies are valued as a way of improving teaching and learning. However, the author also found aspects specific to the Norwegian context, for example well-funded public schools that leave less leeway for privatization and commercialization. The paper concludes with a demand for more systematic approaches in dealing with a whole range of complex questions related to the technology giants and their influence on education policy.

The editors of this Special Issue hope that you enjoy the contributions and that they help to further your understanding of the issues raised and maybe prompt you into considering your own data traces and entanglements with digital capitalism.