
Farina Madita Dobrick · Jana Fischer
Lutz M. Hagen
Editors

Research Ethics in the Digital Age

Ethics for the Social Sciences
and Humanities in Times of
Mediatization and Digitization

 Springer VS

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Introduction

Jana Fischer, Farina Madita Dobrick, Lutz M. Hagen¹

Digitization and mediatization are core processes of ongoing social change. In the course of mediatization, communication increasingly manifests itself via mass media or telecommunications. Therefore, more and more information becomes accessible in the form of data. Digitization converts data into universal digital formats which eases computer processing, leads to the convergence of different media, and thus further fosters mediatization.

Both processes alter social behavior and cultural traditions, thereby generating new objects of study and new research questions for the social sciences and humanities. Further, mediatization and digitization increase the data volume and accessibility of (quantitative) research and proliferate methodological opportunities for scientific analyses. As a consequence, they profoundly affect research practices in multiple ways, e.g.:

- researchers increasingly apply quantitative and automated methods,
- researchers are spoilt for choice by a plethora of rather new and often sparsely explored methods for collecting and analyzing behavioral data,
- the relevance of computer science and mathematics grows for the social sciences and humanities and vice versa,
- research is more prone to invading the privacy of individuals who are the subject of research,
- the line between scientific research and market research tends to blur,
- scientific research seems disadvantaged as compared to commercial research by big players commanding big data repositories of the internet.

Digitization not only provides new data and algorithms, but also a changing research practice in which new norms in scientific behavior need to be developed and old norms need to be scrutinized. Moreover, the ethical perspective points towards a prospective impact assessment on research practice.

1 Jana Fischer | Technische Universität Dresden | Jana.Fischer1@tu-dresden.de

Farina Madita Dobrick | Technische Universität Dresden | farina_madita.dobrick@tu-dresden.de

Lutz M. Hagen | Technische Universität Dresden | lutz.hagen@tu-dresden.de

Research ethics, therefore, need to reflect on implicit normative orientations and consider all actors involved, as well as discuss new digital areas of research, justification, testing, sharing and communication.

One example for such normative orientations was developed by the Ethics Working Committee of the members of the Association of Internet Researchers (AOIR), composed of ethicists and researchers from various regions and countries. They produced two major reports to assist researchers in making ethical decisions about their research and in ever-changing technological contexts (Markham & Buchanan, 2012). This committee had the idea that researchers, students, ethicists, and related institutional bodies and academic organizations in the domain of Internet research may turn to these ethics documents as a starting point for their inquiries and reflection. Because of this, the guidelines were developed out of the day-to-day practices of researchers in a wide range of disciplines, countries, and contexts, as well as consider a wide range of ethical issues and questions that may become relevant in the context of internet related research (Markham & Buchanan, 2012). As an example for those issues and questions, see Figure 1:

Types of data collected	Types of Venues/ Contexts	Commonly asked questions about
Interactions, behaviors, transaction <ul style="list-style-type: none"> • Hyperlinks • Comments or Recommendations • File or Information Sharing • Forwarding / Replying • Interpersonal Interactions, Conversations • Networks 	Direct Communication (formal or informal interviews via real-time or asynchronous text, audio or visual) ...	How is protection of autonomy of participant/author achieved through informed consent or protection of vulnerable persons? ...
	Special Interest Forums (e-mail or web-based conversations and archives, e.g. threaded discussion forums, chatrooms) ...	How do terms of service (TOS) articulate privacy of content and/ or expectations for privacy? Does the author/subject consider personal network of connections sensitive information? ...
Production, Presentation <ul style="list-style-type: none"> • Texts • Images • Video • Audio • User motions and movements • Configurations or personalization of devices ... 	Social Networking (e.g. LinkedIn, google+, Facebook, Twitter, Tumblr, Flickr, FourSquare) ...	Does research purpose and design balance possible conflicts between participants and researcher perceptions of public/private and sensitive/ nonsensitive? Is the data easily searchable, retrievable? ...

Fig. 1: Extract of the appendix 1 (Markham & Buchanan, 2012, p. 18)

There are other, although not overarching, approaches in the field of (qualitative) social science that formulate an ethical codex as an orientation for ethical research principles. For example, Unger (2014) depicts different principles for research ethics in the field of social science: objectivity, integrity, adequacy, voluntary, informed consent, privacy and data minimization. In this context, she also discusses the obstacles and problems that might occur during the research process while trying to adhere to all of those ethical rules/principles (Unger, 2014). Furthermore, those guidelines specifically concentrate on the (qualitative) research process itself and not on potential consequences. Moreover, the principles are focused on social science and more or less ignore other research fields.

Therefore, this book aims to discuss the consequences of digitization and mediatization concerning the subjects, objects, and addressees of research in the social sciences and humanities within a transdisciplinary perspective. In its first section, some of the core problems are identified:

- Understanding of research ethics and its role in times of digitization
- Discussion of scientific integrity and how digitization seemingly leads to its decrease as well as new options to detect scientific fraud thanks to digital media
- Understanding legal conditions/frameworks under which digitized research falls
- Discussing the successes and failures of digitization in lifelong learning and advantages as well as disadvantages of data generated by the interaction between learners and the digital learning object

In the second section of the book, case studies of research, projects in the field of social digital research show some of the problems appearing in practice in the field. This concerns on one hand the digitization of everyday lives in different contexts like e.g. telemedicine, work environment, industry 4.0 or fundamentally changed communication in crisis situations. From a perspective of the communication science, the alteration of journalism caused by digitization is also relevant. In this context, ethical problems occur not only on closer considerations of journalistic work, but they also emerge in regard to user-generated content.

Moreover, research standards and practices in emerging economies, in which digitization may progress more slowly have to be considered. In those countries, digitization may concern areas of life and problems that did not attract any attention in westerly-dominated research landscapes.

The concept of this book reflects up on and was further developed following a summer school held in October in 2015 in Dresden, Germany. The main

focus of this summer school was a transdisciplinary discussion of research ethics in the social science and humanities in times of digitization and mediatization.

The summer school was funded by the German Excellence Initiative giving all participants the possibility to attend. TU Dresden has been selected as one of Germany's 11 Universities of Excellence.

The summer school consisted of talks and workshops by international scientist and experts from various fields providing an interdisciplinary perspective and knowledge to the discussion of the research projects and their ethical challenges of the doctoral candidates participating in the summer school. Those two fundamental parts are as well represented in this book².

This book collects and points out a great variety of challenges the individual researcher but also the scientific community and institutions face in times and as a consequence of digitization and mediatization. Thereby it demonstrates the importance and the necessity of interdisciplinarity in research projects that work in digitized and mediatized fields. Meaning that only research projects that integrate the knowledge of ethicists, informatics, legal scholars and social scientists can successfully tackle relevant questions of a digitized and mediatized world.

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- Unger, Hella von (2014): Forschungsethik in der qualitativen Forschung: Grundsätze, Debatten und offene Fragen. In: von Unger, Hella; Narimani, Petra; M'Bayo, Rosaline (eds.), *Forschungsethik in der qualitativen Forschung*, p. 15-39.

2 The first part contains the keynotes as to core issues while the second part is composed of participants' contributions to the summer school.