

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



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Farina Madita Dobrick
Technische Universität Dresden
Institute of Media and Communication
Germany

Lutz M. Hagen
Technische Universität Dresden
Institute of Media and Communication
Germany

Jana Fischer
Technische Universität Dresden
Institute of Media and Communication
Germany

The German Excellence Initiative funded this publication as TU Dresden has been selected as one of Germany's 11 Universities of Excellence.

ISBN 978-3-658-12908-8 ISBN 978-3-658-12909-5 (eBook)
<https://doi.org/10.1007/978-3-658-12909-5>

Library of Congress Control Number: 2017956137

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Printed on acid-free paper

This Springer VS imprint is published by Springer Nature
The registered company is Springer Fachmedien Wiesbaden GmbH
The registered company address is: Abraham-Lincoln-Str. 46, 65189 Wiesbaden, Germany

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

Keynotes as to Core Issues

Research Ethics in the Digital Age: Fundamentals and Problems

Hermann Diebel-Fischer¹

Keywords: research ethics, history of research ethics, interdisciplinarity

Abstract

This paper outlines different readings of the term research ethics and presents the approach of integrated research ethics. This approach steps beyond an understanding of research ethics as applied ethics and calls for the development of ethics frameworks not within the classical structures, i.e. in theology or philosophy departments, but organized in a post-departmental interdisciplinary structure.

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1 Hermann Diebel-Fischer | Technische Universität Dresden | hermann.diebel@tu-dresden.de

1 Introduction

Research, science, and scholarship play a prominent role in our society – a role which is becoming more and more important. However, of all the endeavors and projects that take place in the scientific community, only a small amount is noticed by the public. Major breakthroughs and scandals are headline material for newspapers; most of the scientific and scholarly work – be that great results or failures – will only be noticed by fellow scholars, even though it might be contributing to developments which are undesirable for the public. Efficient control over research activities is not possible for individuals within a society. But still people place trust in those who are engaging in research activities. This trust can, at least partly, be attributed to research ethics.

Universities, colleges, profit and non-profit research organizations, as well as companies, are places where people work on research in science, engineering, and the humanities. ‘Research’ is an umbrella term for a large scale of paradigms and methods in pursuit of the attainment of knowledge. A theologian who works with books at his desk is different from a biologist who works in her laboratory in more ways than just their respective work place environment. Not only the topics they research differ from one another, but the possible applications of knowledge gained by each differ as well – and thus this knowledge’s impact. However, every research result may have small yet unforeseeable impacts which is why, regardless of the research area, possible outcomes should be considered as early as possible.

But both the theologian and the biologist have more in common than one might first notice – both are academics, both work guided by methods and theoretical frameworks, the results of their work are intersubjectively comprehensible. They engage in research activities to gain knowledge in an open and unbiased way.² Both follow the idea of scientificity. Both are free to choose research questions at their will and do not have to justify their decisions.³ They may choose the research objects and methods they want, but they have to deal with the moral questions attached to the decisions they make. Boundaries are set by the law and codes of conduct, ethics, professional practice of the respec-

2 Cf. R. K. Merton’s ethos of science, in which he points out four characteristics: “Universalism”, “‘Communism’ (in the non-technical and extended sense of common ownership of goods”, “Disinterestedness,” and “Organized Skepticism.” (Merton, 1958, p. 553-561).

3 These are the ideal circumstances for tenured professors in Germany who are not engaged in third-party funded research or contract research, but generally everyone can claim it. This independent research does not require any legitimation from outside, however, if humans or animals are involved, it might require approval from an ethics review board (cf. Turner, 1986, p. 16).

tive learned societies.⁴ In Germany, research is protected by article 5 (3) of the Basic Law (constitution) (Grundgesetz, 2016), yet this defensive right does not release researchers from responsibilities they hold beyond any legal regulations.⁵ This ‘burden’ which individual researchers have to bear and which cannot be delegated to collectives,⁶ will be analyzed in this paper.

Outlining the structure, the tasks, and the benefit of research ethics in the digital age requires that we first clarify the questions we debate: What is research ethics, and what are the characteristics of the digital age and how are they related? This is important when we talk about research ethics *in* the digital age since this implies that there might be certain conditions which can yield further implications. In this paper, the argument for an integrated approach of research ethics is outlined.

2 Fundamental questions concerning research ethics

Even if ethics seems to be an everyday issue, we must not forget: Ethics is an *option*, nothing more but also nothing less than this. That might appear as a triviality at first sight, yet, there is more to it. Reflecting on actions is a decision that has to be made, as this reflection (prior to or even after the completion of an action) is not a condition tied to actions. Where some might think this is a natural thing to do, others disagree.

Since ethics is optional, it is required to promote ethics if one deems it useful. Ethics is both an area of research within the arts and humanities (*‘Geisteswissenschaften’* in German) in which theories concerning the reflection on actions are developed – which help checking the validity of justifica-

4 Examples of codes of conduct and ethics codes are: Ethical Decision-Making and Internet Research: Recommendations from the AoIR Ethics Working Committee, Version 2 (Markham & Buchanan, 2012); Ethik-Kodex der Deutschen Gesellschaft für Soziologie (DGS) und des Berufsverbandes Deutscher Soziologinnen und Soziologen (BDS) (2014). It is common practice in German scholarly societies in social sciences to impose these codes (DGPuK, 2015; DVPW, 2016). This is not always seen as an ideal situation, as Günther points out structural problems connected to questions of motivation, liability, and competence (2003, p. 199f).

5 According to Scholz, scholarly research and science (“Wissenschaft”) is “a particularly autonomous circumstance of life, which is rooted in and comprises a plethora of intellectual and autonomous as well as communicative cognitive processes and imparting processes, and which remains open (has to remain open) regarding its definition.” (my transl.) Yet, there are restrictions (Scholz, 2014, margin no. 85.87f.).

6 According to Birnbacher (2013, p. 19), there are no collective agents, because collectives do not have to capability to reflect on actions, nor are they able to reason. Therefore, we cannot evaluate collectives with respect to morality, even if we can attribute actions to them. The attribution of characteristics of awareness is only possible with respect to individuals within the collective.

tions of moral statements (Düwell, 2013, p. 37) – and it describes the application of this knowledge to a specific area of research (‘applied ethics’), which is as what research ethics is generally understood.

As we cannot assume that it is obvious what the right decision is within a certain setting, we need one or more methods that help to provide orientation towards what action should be pursued. These methods for the evaluation of different courses of action, as helpful as they may be, can also be object of controversies as the decision for a method is an action which again can be the object of an ethical evaluation.⁷

This problem will have to be left aside and we will directly proceed to the analysis of the term ‘research ethics.’ This compound noun hints at a special kind of ethics which is connected to research. Presumably, research ethics belongs to the field of applied ethics – but there is another option.

Schweidler identifies three readings of the German term “*Wissenschaftsethik*” (“ethics of science” including all academic disciplines), which are (1) research ethics, (2) the ethos of science as put forward by Merton (1958, p. 553), and (3) “the responsibility of research” (2005, p. 957, my transl.). The latter is found in Lenk’s work, who analyzes ethics of science and research ethics with regard to responsibilities within the field of science and research and beyond (Lenk, 1991, pp. 54-75).

Ethics of science (in a broader sense, including the arts and humanities) and research ethics are not unambiguously defined areas, as they are merely constructs which help provide orientation on the wide field of ethics. Similar to the blurred boundaries between the fields of economic ethics and the ethics of politics, we can find overlappings between ethics of science and research ethics. Both terms are used interchangeably (Graumann, 2006, p. 253). In Germany, however, the law understands *Wissenschaft* (the aggregate of all academic disciplines): “as a generic term for scientific or academic research and academic teaching” (Scholz, 2014, no. 85). Notably, this differentiation is not upheld throughout the discourse on research ethics and ethics of science as teaching is marginalized. Graumann differentiates between research ethics, which deals with research and the ethics of science, which deals with “the triad science, technology, and society”,⁸ (2006, p. 253, my transl.) which is also an arbitrary position and not a natural setting.⁹

7 This is a problem which is called “Münchhausen trilemma”: it is either an “infinite regress”, a “logical circle”, or stopped by “breaking off the process” (Albert, 1985, p. 18). This problem will not be discussed in this essay.

8 This idea can also be found in the title “Technik- und Wissenschaftsethik” (“Technology Ethics and Ethics of Science”, my transl.) (Hubig, 2003).

9 This however puts a focus on technology in a narrower sense (technical artefacts) and leaves aside all non-technical disciplines.

If we take Graumann's proposal of research ethics as ethics that focuses on research, then ethics of science could be understood as a superordinate ethics (but not metaethics) that focuses on research and researchers, research institutions and their relation to society, individuals, culture, law, etc. In this case, research ethics would be a special case of ethics of science, which would take the general settings and conditions of *Wissenschaft* (all academic disciplines) into account. Then, Lenk's account of the term responsibility could be employed in an appropriate way. Lenk (1991, p. 61) proposes an analytic differentiation in (1) "responsibility concerning actions and the results of actions," (2) "responsibility with respect to roles and tasks," (3) "responsibility regarding morals," which is always attributed to an individual, and (4) "legal responsibility," which he understandably leaves aside, as the reflection on morals and morality and the legal sphere aim at different goals: the first at the good life, the latter at the creation or protection of legal peace. Lenk (1991, pp. 61ff) notes that these responsibilities may collide which makes prioritizations inevitable. He also differentiates between an inside view of the responsibility of researchers which focuses on the "ethos", i.e. the basic convictions and attitude of a researcher, and an outside view which focuses on ethics (Lenk, 1991, p. 58).

3 Problems in research ethics

Research ethics can be understood as a two-part endeavor: first, as part of ethics as an academic discipline which is usually situated in the philosophy or theology department (i.e. as part of foundational research in ethics), and second as ethics which is applied to research processes which are not connected to ethical questions (i.e. as applied ethics). Both carry the same name, yet differ in the level of reflection. This becomes a problem, when the discourse on fundamentals and the discourse concerning the application of ethics are drifting apart. Merging both understandings of research ethics into one process yields an environment in which the problem of the drifting apart disappears.

Prior to exploring the options for this merger, we need to take the possibilities of research ethics into account: Who are the actors in this field and what is done there? When people demand 'science requires ethics' or 'research needs boundaries,' they employ abstract nouns while meaning those who work in this field. Thus, research ethics will always have to consider people even when it takes institutions into account. The content of research ethics, however, is not clearly defined. The examples that can be found in literature range from how to deal with plagiarism (Rieble, 2014, pp. 11-23), fraud (Elger & Engel-Glatter, 2014, pp. 25-42), to general accounts of responsibility in the academic sphere. Some are very specific, others, such as Jonas' concept of a "Heuristic of fear"