Digital Ethics

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This Methods Futures Briefing focuses on digital ethics. For decades, researchers have studied digital ethics at the intersection of philosophical thought, communication science and computational science. The core of its development lies in consideration of technological transformations and their ethical impact (Bynum, 2001). Terminology has changed over decades (Maner, 1980) while the focus of reflection has remained constant. The current debate around digital ethics includes deeper philosophical (authorial) and value-based (axiological) questions about digital-technological development itself (Mazzi, 2024). There are potentially new questions and problems regarding the application of digital ethics in the conceptualization, design and implementation of social research. This briefing describes digital ethics and suggests some possible developments that social researchers may need to consider in the medium term.

What are digital ethics?

Digital ethics focus on the ethical guidelines and processes researchers do when they conduct studies in digital spaces. Digital ethics, also referred to as techno-ethics, is dynamic and adaptable, evolving with specific research objectives, participant needs, and the unique contexts of each study. Digital ethical concerns in research are being pursued (socially) by committed researchers with the aim of contributing to the development of principles that protect human dignity and promote human flourishing in the digital age (Floridi, 2023). This adaptability is crucial as it allows practitioners to respond meaningfully to the rapid advancements in digital tools, platforms, and data-handling processes that characterize modern research. A techno-ethics framework ensures principles, practices, and approaches that guide ethical considerations throughout the digital research process, covering issues of digital rights, responsibility and privacy (Verma and Garg, 2024).

As an example, digital ethics is emerging as particularly significant in **qualitative educational research**, where the increasing use of technology challenges traditional methodologies. The boundaries between face-to-face and technology-mediated interactions are blurring, creating potential misunderstandings and necessitating new forms of consent and engagement. Researchers are thus required to adopt a continuously evolving ethical framework that accounts for the unique demands of digital platforms, advanced data privacy measures, and AI-driven research tools (Thomas Dotta et al., 2024).

'Onlineification' since COVID-19 and future developments

The shift to online research during the COVID-19 pandemic has resulted in debates regarding the advantages and challenges of digital research. Despite the advantages, notably the possibility of 'making research happen' (Nind et al., 2023: 5), the use of digital tools also presents relational dilemmas related to **participant identification, selection, and engagement**. Tools including AI-powered survey tools, immersive virtual and online environments for communication, and evolving videoconferencing technologies (Deslandes and Coutinho, 2020; Jain and Brockova, 2022), point to a future where researchers must consider how to ethically engage in complex multi-modal research interactions.

In the next decade, ethical digital research will shape research conceptualisation, design, and implementation, and may require rethinking principles of **digital security, informed consent and equity**. Researchers will need to stay agile and adapt to digital innovations in the face of change (Rahman et al., 2021). This dynamic shift also demands to indicate that research ethics committees (RECs) keep pace with digital advancements (Winter and Gundur, 2024). In this context, digital ethics is closely intertwined with

research communities' varying ethical commitments as they navigate an uncertain future (Nind et al., 2023).

The growing use of cloud-based systems for data collection and storage raises significant **digital security** concerns. Researchers can attend to such concerns by using devices with features like biometric access (e.g. scanning facial images, fingerprints, iris and voice recognition). These tools provide some assurance that only registered users can access and update the stored data (Kobakhidze et al., 2021). However, the access protection features can still be accessed and used by the service provider to monitor user activity, or even by third parties (Kindt, 2013). This so-called "Pandora's box", in a high-speed environment of pressures to publish, can subvert ethical commitments of rigour and care (to participants/data), and bring risks of losing control over digital engagement, impacting individual autonomy and privacy (Montasari, 2024). As a fundamental aspect of contemporary social research, digital ethics - encompassing safe technology access and reliable internet connections - will continue to shape research practices, emphasising the need to center human rights in the regulation of transformative technology (Wang et al., 2024).

As digital tools become more advanced, there is also a risk of **digital exclusion** deepening (Melis et al., 2021). Researchers must remain vigilant about how digital tools might **perpetuate bias, misrepresent vulnerable populations**, or obscure important social dynamics (Noble 2018; Otto and Haase, 2022). In this context, the social sciences can play a critical role in helping future researchers anticipate and address these challenges through pedagogical initiatives (Freitas et al., 2024).

Resources for research practice

Digital **consent** practices are evolving further as **biometric and blockchain technologies** and the opportunities of digital footprint management processes (Meckin and Elliot 2024) **emerge**, offering opportunities for social researchers critically evaluate whether digital tools enhance or hinder ethical practices related to consent tracking and participant engagement. Over the coming years, the integration of artificial intelligence (AI) and machine learning in consent management, perhaps through the use of **AI avatars,** may provide more nuanced approaches to understanding participant preferences and dynamic consent models. Resources such as the [Association of Internet Researchers' (AoIR)](#)

guidelines will remain valuable for navigating these complex ethical questions, offering updated guidance through resources like [Internet Research: Ethical Guidelines 3.0,](#) managing digital consent in complex research scenarios.

Data **privacy** in digital research settings requires more than mere compliance with open-access standards and instead necessitates robust **cybersecurity measures**. As cyber threats become more sophisticated, and as payloads become more significant, researchers will need to stay informed about cutting-edge and best practice security protocols. In the next 5-10 years, we can expect more enhanced training programs in security protocols and practices, tailored to social scientists, focusing on emerging issues such as data encryption, secure cloud storage, and the implications of quantum computing for data security. Universities have developed guidelines and toolkits to support their researchers in these areas. For instance, resources from the [University of Queensland](#), [New York University](#), and [University of Oxford](#) provide comprehensive cybersecurity toolkits that are continually updated to reflect the latest developments.

Equity, and promoting **representational justice** in research methodologies, is crucial for ethical digital research. As the landscape of digital research continues to evolve, new frameworks and resources will emerge to help researchers design equitable methods that address disparities in access and representation. Initiatives by the [Digital Equity Research Center](#) are invaluable resources, offering insights into designing inclusive and equitable digital methods. Researchers could access the work of [Colin Rhinesmith](#) and [Greta Byrum](#), who are at the forefront of this evolving discourse.

Future

Digital ethics will remain a cornerstone of responsible research practice as it adapts to emerging challenges and technologies**.** The commitment of researchers to methodological rigor, transparency, and flexibility will be critical for navigating the **evolving ethical landscape in digital research**. As digital tools progressively shape research methods, the focus on equity, informed consent, and data security should guide ethical decision-making, helping researchers to uphold ethical standards in a rapidly changing digital world.

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