

1 An Introduction to the Societal Roles of Ethics Codes

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In this collected volume, we are interested in the roles of ethics codes and ethical guidelines in professions in which research and innovation play an important role and where emerging technologies bring about considerable, sometimes fast-paced change. These can be broad technological trends, for examples the expanding relevance of artificial intelligence in most of life, or very specific contexts such as guidelines for clinical care related to cardi-pulmonary resuscitation.

In all these contexts, innovations in science and technology are central, as are questions about how to deal with these innovations and developments, both at a professional and at a societal level.

This volume explores three principal areas surrounding the roles of ethics codes and guidelines in modern professional and public life. The first section of this volume discusses the role of ethics codes and guidelines in changing disciplines; the second section looks at how codes shift in response to and help shape the position of emerging technologies in societies around the world. The third and concluding section considers the current and future role of ethics codes.

Before we begin to explore how and why codes of ethics are an important way to study society, technological developments, and the changing role of professionals, it is essential to gain a better understanding of why codes of ethics exist, how they are developed, and the different uses they have.

1.1 Roles of ethics codes and ethical guidelines and why they are important

A code of ethics is an authoritative formulation of the (morally permissible) standards governing the conduct of members of a group, just because they are members of that group. A group consists of two or more moral agents. The authority of a code may derive from at least one of several sources: consent, custom, tradition, convenience, law, fairness, and so on; but to be a code of *ethics*, at least one source of its authority must be moral.

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Codes of ethics have at least six uses: **First**, and most important, a code of ethics can document, declare, or establish special standards of conduct where experience has shown that common sense, industrial tradition, or occupational custom is no longer adequate. Codes of ethics can change practice for the better. **Second**, a code of ethics, being authoritative, can help those new to the practice learn how to act. Codes can teach, much as dictionaries can teach its readers what words mean. **Third**, a code can remind those with even considerable experience, of what they might otherwise forget. Codes have a mnemonic function. **Fourth**, a code can provide a framework for settling disputes, even disputes among those with considerable experience. **Fifth**, a code can help those outside the group (“the public”) understand what may reasonably be expected of those in the group. **Sixth**, a code of ethics can justify discipline or legal liability. So, for example, once a profession has a formal code of ethics, courts can appeal to it when deciding what reasonable care in that profession is. The code’s higher (more demanding) standard may, and should, replace the standard common sense would otherwise set for the group.

Attempts have been made to distinguish between (a) short, general, or uncontroversial codes (“code of ethics,” “statement of values,” or the like); and (b) longer, more practice oriented, more detailed, or more controversial codes (“code of conduct,” “guidelines,” “rules of practice,” or the like). While some such distinction may sometimes be useful in practice, it is hard to defend in theory. A “code of conduct” is as much a special standard as a “code of ethics” is except where the “code of ethics,” boiled down to a mere restatement of morality, is just “a moral code”. “Codes of conduct” are also generally as morally binding as “codes of ethics.” A code of ethics should be as long as it needs to be to do what it is supposed to do; the same holds for a “code of conduct.”

Ethical guidelines, such as the research guidelines discussed by Philip Brey in Chapter 2 often apply to specific practices and groups of collaborators. In some cases, these ethics guidelines are set by professional associations, in others, these ethical guidelines are adopted by governmental organizations as a form of regulation; practitioners not following these guidelines can be subject to some form of enforcement, such as the withdrawal of research funds or fines. Chapter 9 provides a discussion of the development of ethical guidelines for the responsible use of nanotechnologies in research and development and reflects on how these guidelines not only influence practitioners, but also public views on these emerging technologies. Guidelines need not only apply to research and scholarly publication. For example, the Association of National Advertisers has published their “Guidelines for Ethical Business Practice,” in 2020 that include specific, updated guidance for digital marketing and mobile marketing practices (ANA, 2020). Guidelines like this, discussed in Chapter 4, “Informed Consent in Digital Data Management”, can help practitioners navigate current regulation, or are sometimes adopted by industry associations to pre-empt the passage of more restrictive or less informed regulations.

1.2. Ethics Codes Collection: An introduction

The Ethics Codes Collection of the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology (<http://ethicscodescollection.org/>) is a unique resource, comprising a curated collection of over 3,000 ethics codes and guidelines¹ from over 1,750

¹ Except where they are explicitly distinguished, any mention of “ethics codes” in this introduction should be understood to refer both to codes and guidelines.

organizations. The ethics codes in the collection span over 220 years and include codes and guidelines from over 100 different disciplines and industry sectors. The collection serves as a dynamic global resource for informing ethical decision making in professional, entrepreneurial, scientific, technological, and other fields. It also serves to inform critical research into the advancement of ethical practices in a rapidly changing world. The Ethics Code Collection consists of both formal codes and sets of voluntary guidelines. The latter are distinct in character, and present interesting ethical questions in their own right.

The collection began with the founding of the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology in 1976 and has continually grown over the past 45 years. In 1996, the Ethics Center received a grant from the National Science Foundation to put its paper collection of codes and guidelines online. In 2016, the Ethics Center received a generous grant from the John D. and Catherine T. MacArthur Foundation to enhance the Ethics Codes Collection. The grant provided the resources to embark on an extensive improvement of the digital Ethics Codes Collection and enabled new research on the current and future roles of ethics codes in professional, business, and technological innovation. This collected volume is one result of the MacArthur grant.

As interest in ethics codes continues to grow, so does the Ethics Codes Collection. The collection attempts to collect codes from professional associations, industry groups, government agencies and businesses over a large range of time, allowing scholars and practitioners to follow the development and growth of ethics reflection in different professions and fields. The collection also seeks to document the development of new professions and fields such as the rise of big data and artificial intelligence, as well as interest in the different ethical questions raised in these new contexts and growing technology use.

Many of the articles in this volume serve as examples of the scholarship the Ethics Codes Collection supports. This includes in-depth analysis of the changes that codes of ethics take over time – either through the lens of one professional association or over an entire profession as Michael Davis does in Chapter 3 for engineering. Scholars can also chart growing interest in ethical topics across multiple fields as Stjepan Ljudevit Marušić and Ana Marušić do in Chapter 5 in their analysis of mentions of research integrity in professional codes.

The Ethics Codes Collection also provides models for professionals and practitioners writing or revising their own code of ethics, such as the process outlined by Greg Adamson and Joe Herkert of the revision of the IEEE code to include the ethical design of artificial intelligence and machine learning in Chapter 8. For over 45 years, the Ethics Codes collection has been used as a starting point for the development of new codes, and the scholars and librarians of the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology have been active in supporting these efforts in everything from providing feedback on provisional drafts to serving as members of code development committees. This includes the development of the Software Engineering Code of Ethics by the Association for Computing Machinery and IEEE, the development of ethical guidelines on research integrity for Big 10 Universities, and for many other smaller businesses and professional associations.

Though still limited in scope, the Ethics Codes Collection also seeks to collect international codes of ethics and guidelines to allow for the comparison of codes between countries. These comparisons can be extremely useful in several ways. As shown in part II of this volume, the comparison of ethics codes and guidelines internationally can showcase what ethical principles and issues different societies (at the professional, governmental, or public level) value by what the ethical codes stress – be it sustainable development, individual rights, or scientific progress. As international collaboration across borders continues to increase, it is important that professions, businesses, and governments continue to learn from one another and begin to develop international best practices to allow for the safe and ethical transfer of knowledge, information, and the benefits of scientific progress.

The Ethics Codes Collection not only explores the ethical principles of different professions and organizations; the development of ethical guidelines also provides a fascinating window into scientific and professional cultures that exist in a society. What concerns do the authors of these guidelines address, whose opinion is sought in the development of the guidelines, and how guidelines are distributed and ultimately enforced provides a snapshot into the inner workings of the institution who developed the guidelines or code, and their envisioned place in society.

The question of who has a seat at the table in the construction of codes of ethics and ethical guidelines is an interesting one that will come up in multiple chapters of this collection. A code of ethics written solely by a group of professionals will likely be very different than one written by a group of legislators or ethicists, and what happens when members of the public have a seat on the authoring committee? Students and scholars of ethics codes quickly become attuned to when a code is solely inward facing and only addresses the concerns of members while leaving out concerns of clients, the public, and other stakeholder groups. Outward-facing codes can also be used as a defensive measure against criticism, but provide limited ethical guidance to group members.

The collection policy for the Ethics Codes Collection has been kept quite broad on purpose – it includes codes of ethics for major professional societies like the American Psychological Society and more obscure codes such as the Ethical Standards and Guidelines of the American College of Vedic Astrology. The only qualification is that it must be from a recognized organization – not from one individual – and the authors must consent that it be made publicly available via the Ethics Codes Collection. As of this year, the Collection contains codes for how to perform scientific research in disaster areas, guidelines developed by indigenous communities governing how researchers should collaborate with members of their community, and guidance for the ethical use of polygraph tests (IAVCEI 1998, South African SAN Institute, 2017, American Polygraphy Association, 2015). The goal is to provide users with the widest possible access to professional codes and guidelines accompanied by scholarly and technological tools to allow for innovative and new research to be performed. We hope that this volume serves as inspiration to professionals, practitioners, and scholars for how codes of ethics can be studied, developed and used to promote more ethical practice in all areas the Ethics Codes Collection covers.

1.3 Ethics Codes as Sources for Research into the Professions

Ethics codes represent ongoing conversations in the sciences, professions, and business about what standards, such as fairness and decency, should apply when the law does not. For instance, one can trace the emergence of attention to issues of sustainability and protection of the environment by following changes in architectural and engineering codes of ethics. The 1922, 1964, 1970, American Institute of Architects' "Canons of Ethics" and "Standards of Professional Practice," detail an architect's ethical obligation to their clients and fellow professionals. Only in the 1977 code do we see the first references to architects' duty to "conserve natural resources and the heritage of the past." This concept continues to develop during the next few years (1979, 1996, 2007, 2012, and 2017), the concept being defined as the standard demands more.

The American Anthropological Association (AAA) responded in the same manner when some members proposed amending the AAA Code of Ethics in 2007 to stop its members from working with the U.S. military as part of its Human Terrain System (HTS). HTS, which began recruiting anthropologists in 2007, sought to improve the military's cultural awareness when deployed in complex social-cultural environments (Human Terrain System 2008). A statement by the AAA Executive board during that same year called the HTS an "unacceptable application of anthropological expertise" and asserted that "any anthropologist considering employment with HTS will have difficulty determining whether or not s/he will be able to follow the disciplinary Code of Ethics." The statement goes on to discuss concerns about avoiding doing harm to the individuals and communities that anthropologists study when working with the military in a war zone, and the ability of anthropologists to gain voluntary consent from participants in conflict situations. The 2012 version of the AAA Code, section 4, "Weigh Competing Ethical Obligations Due to Collaborators and Affected Parties," indirectly addressed these issues by going into details about how anthropologists must uphold the principle of "do no harm" in navigating these competing obligations to employers and funders, and their professional obligation to the communities they study and collaborate with.

One of the most critical aspects of the Ethics Codes Collection is the ability to trace how ideas, principles, and concepts travel between different professions through their codes. Concepts from the field of medicine have traveled from the clinical setting into the realm of information sciences, and many ethics codes go on to cite other professional codes that have helped guide their development. An example of this is the citation of the Code of Ethics of the National Association of Social Workers (2008, 2017) in the Online Therapy Institute's 2010 "Ethical Framework for the Use of Social Media by Mental Health Professionals", and the 2019 version of the American Health Information Management Code of Ethics.

1.4 Ethics Codes and Emerging Technologies

In addition, ethics codes and guidelines demonstrate how institutions and organizations address emerging situations and modern technologies. These can be technologies and practices new to a specific field of research, to emerging technologies that have the potential to change daily life for millions of people. This phenomenon can be seen in the fields of computer science, electrical engineering, biomedical research, and others.

Around the world, engineers, entrepreneurs, and researchers in many fields, including biotechnology, information systems, robotics, artificial intelligence, media, and communications,

often enter new territory with improvised guidelines for their work. In response to such guidelines and the emerging technologies provoking them, many professional associations are rewriting their codes of professional ethics or developing more specific guidelines to address innovation in their fields. A prominent example is the Code of Ethics and Professional Conduct of the Association for Computing Machinery (ACM) published in 2018. There are also other organizations, such as the International Organization for Standardization (ISO), doing something similar. In Europe, the movement for Responsible Research and Innovation seems to be shaping how researchers and practitioners approach innovation.

Changes in codes of professional ethics and more detailed guidelines represent an unparalleled window into the research, innovation, and emerging technologies they seek to regulate. They are crystallizations of ongoing conversations in scientific and professional fields about how justice, decency, safety, and the like should be realized in practice where the law is silent. They show how institutions and organizations are addressing modern technologies.

In fields of rapid innovation, ethics generally precedes legal regulation and, even in fields that are relatively settled, it seldom confines itself to legally required acts. Ethics provide flexibility law does not.

1.56 About this Collected Volume

This collected volume exemplifies the value of both codes of ethics and guidelines in general as well as the Ethics Codes Collection in particular. Many of the chapters in this book have drawn upon the Ethics Codes Collection to a great extent, allowing the authors to trace the development of ethics codes through a specific discipline or the prevalence of a principle, ethics topic, or even a particular phrase through the guidelines of hundreds of different organizations and disciplines.

The book explores three principal areas surrounding the role of ethics codes in professions where research and development are important and in fields in which emerging technologies and other developments produce substantial, often rapid change. The first part of this volume “Past, Present, and Future: Ethics Codes and Guidelines in Changing Fields” explores central concepts and principles in ethics codes and their modification through time. The second part “Ethics Codes, Emerging Technologies and International Viewpoints” looks at how codes shift in response to and help shape the position of emerging technologies in societies around the world. The third and concluding part “Changing Purposes and Different Uses of Ethics Codes” explores some possible limitations of ethics codes as they are currently written and used and suggests how they might change to better both our professional and personal lives.

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