

Foundations of Information Ethics

**Edited by John T. F. Burgess
and Emily J. M. Knox**

Foreword by Robert Hauptman

ALA
Neal-Schuman

CHICAGO :: 2019

alastore.ala.org

© 2019 by the American Library Association

Extensive effort has gone into ensuring the reliability of the information in this book; however, the publisher makes no warranty, express or implied, with respect to the material contained herein.

ISBNs

978-0-8389-1722-0 (paper)

978-0-8389-1850-0 (PDF)

978-0-8389-1849-4 (ePub)

978-0-8389-1851-7 (Kindle)

Library of Congress Cataloging-in-Publication Data

Names: Burgess, John T. F., editor. | Knox, Emily, 1976- editor.

Title: Foundations of information ethics / edited by John T.F. Burgess and Emily J.M. Knox ; foreword by Robert Hauptman.

Description: Chicago : ALA Neal-Schuman, 2019. | Includes bibliographical references.

Identifiers: LCCN 2018053595 | ISBN 9780838917220 (paper: alk. paper) | ISBN 9780838918494 (epub) |

ISBN 9780838918500 (pdf) | ISBN 9780838918517 (Kindle)

Subjects: LCSH: Information technology—Moral and ethical aspects. | Information science—Moral and ethical aspects.

Classification: LCC QA76.9.M65 F68 2019 | DDC 175—dc23 LC record available at <https://lcn.loc.gov/2018053595>

Cover design by Kim Thornton. Cover image ©Will/Adobe Stock.

Book design and composition by Karen Sheets de Gracia in the Cardea and Acumin Pro typefaces.

© This paper meets the requirements of ANSI/NISO Z39.48-1992 (Permanence of Paper).

Printed in the United States of America

23 22 21 20 19 5 4 3 2 1

CONTENTS

FOREWORD, BY ROBERT HAUPTMAN *vii*

PREFACE *ix*

- 1 Principles and Concepts in Information Ethics** *1*
John T. F. Burgess
- 2 Human Rights and Information Ethics** *17*
Paul T. Jaeger, Ursula Gorham, and Natalie Greene Taylor
- 3 History of Ethics in the Information Professions** *25*
John T. F. Burgess
- 4 Information Access** *37*
Emily J. M. Knox
- 5 Privacy** *47*
Michael Zimmer
- 6 Ethics of Discourse** *57*
John M. Budd
- 7 Intellectual Property Ethics**
Kathrine Andrews Henderson 67
- 8 Data Ethics** *77*
Peter Darch
- 9 Cybersecurity Ethics** *91*
*Jane Blanken-Webb, Imani Palmer, Roy H. Campbell,
Nicholas C. Burbules, and Masooda Bashir*

10 Cognitive Justice and Intercultural Information Ethics 103

Rachel Fischer and Erin Klazar

11 Global Digital Citizenship 115

Margaret Zimmerman

12 Emerging Issues 127

Amelia Gibson

ABOUT THE EDITORS AND CONTRIBUTORS 137

INDEX 143

FOREWORD

Robert Hauptman

Things have changed dramatically since I first used the term information ethics (IE) thirty years ago and subsequently founded the *Journal of Information Ethics*. The concept caught on slowly, first in library and information science and then in other disciplines. A few of us massaged and propagated it at conferences and workshops and in publications. And I scrupulously followed its development and evolution by monitoring journals and citation indices. Quite early, Martha Montague Smith decided to return to school to earn a second doctorate; she wrote the first dissertation on IE (at the University of North Carolina) and I served as the outside reader. One might say that eventually things exploded and IE could be found almost everywhere. A Google search for the precise term *information ethics* brings up 202,000 hits and, amazingly, there are 620 YouTube videos available on the subject. This is all to the good, I think, because an ethical attitude to the production, dissemination, storage, access, and retrieval of information and data is beneficial and necessary to a well-functioning information society; this is affirmed by crisis after crisis concerning false news, fake facts, social media privacy invasions, and everything else.

Scholars have written about IE at great length, but surprisingly there have been very few monographic treatments (and some books that include the phrase in their titles may not home in precisely on the topic). Even my own recent study will not appear until 2019. Therefore, it is a wonderful occasion to celebrate the publication of *Foundations of Information Ethics*, which offers twelve chapters, some conceptual in nature (see Burgess, chapter 1) and others with a more practical emphasis (see Henderson, chapter 7) on privacy, cybersecurity, or human rights, for example, that are subsets of information ethics.

In chapter 1, John T. F. Burgess delineates guiding principles and concepts in a unique and enticing narrative framework, makes a case for argumentation, rightly insists that “information ethics may . . . provide normative, or morally guiding, principles,” and presents an extremely useful, concise contextual overview of four ethical systems: deontology, consequentialism, character ethics, and contractual ethics. His chapter is an exemplary introduction to the means by which information professionals and others can proceed ethically in trying informational times. Kathrine Andrews Henderson (chapter 7) discusses intellectual property ethics, which is a difficult concept because property rights are based in law, and law and ethical commitment sometimes clash. It is difficult to strike a balance between different rights holders. She presciently notes that “The natural right of private property is one way of examining the ethics of the laws protecting the various types of intellectual property. However, another approach might also be applied—justice as fairness.” Amelia Gibson’s chapter 12 lays out an array of emerging issues so diverse and so pressing that one reels in fear: ethical problems with algorithmic bias, social media, marketing, fake news, open data, 3-D printing, AI, and health data ownership.

In other chapters, we learn that “increasingly, a central aspect of human rights is information,” and that “it is more accurate to say that there is not a digital divide but many digital divides along economic, geographic, technical infrastructure, skills, gender, race, income, and other lines of separation.” (Big) data presents innumerable, sometimes insurmountable

ethical problems, but “at the same time, researchers in cybersecurity lack agreement upon common ethical principles and some remain unconvinced of the possibility of establishing a universal framework that can address the realm of cybersecurity at all.” Cognitive justice insists that “different forms of knowledge . . . [are] equal to other forms of knowledge . . . [and have] the right to exist,” and therefore “all forms of knowledge are valid and should co-exist in a dialogic relationship to each other.” And we learn many other things.

A similar structure in many of the chapters lends an additional layer of continuity. Sections present continuing issues and concerns, case studies, primary source materials, and further reading, and may supplement the lists of references.

The extreme diversity of these chapters offers the reader an opportunity to survey the entire IE field and come away with a replete understanding of where we stand and where we must go to avoid the pitfalls that currently stalk us, whether we reside in the US, Western Europe, Russia, China, or Botswana. The global informational world is unbounded. We are all part of a single whole and should act with responsible ethical commitment to avoid censorious, disinformational, invasive, demagogic, or totalitarian control.

PREFACE

In January 2016, at the annual meeting of the Association for Library and Information Science Education, the Information Ethics Special Interest Group celebrated the tenth anniversary of the special interest group's (SIG's) formation. The occasion was marked by a session convened by the editors of this volume as an opportunity to reflect on the SIG's 2007 Position Statement on Information Ethics in LIS Education and to look forward to the next decade of SIG activities. Out of that meeting came a broad consensus among those who taught information ethics coursework that there was a need for a work to supplement existing professional ethics texts by articulating the intellectual underpinnings of the information ethics discipline. This volume was conceived as a direct response to that consensus.

Beyond the information ethics education community, there is also a need for greater understanding of the ethical dimensions of information systems and technologies. News broadcasts, social network posts, and everyday conversation increasingly turn to questions that are relevant to information ethics researchers: Are healthy discourses possible online? What is expertise and which experts should we trust? How much privacy should we be expected to give up in exchange for access to services? What are the appropriate limits when protecting intellectual property? And so on. All too often, public discussions of these topics come down to expressions of personal preferences or are subject to argument through identification. This is when, upon learning what position a group with whom one identifies holds, one begins to uphold and defend that group's position. Questions prompted by emerging information technologies, and the uses of those technologies, are often complex, nuanced, and difficult to resolve satisfactorily through reductive arguments, leaving the market to decide what is permissible instead of reasoned consensus. These chapters were selected to provide the terminology, frameworks, and principles needed to participate in these important conversations in deliberate and constructive ways.

The chapter authors have all previously contributed to the field of information ethics through research, teaching, and/or service. This collection of original chapters was written to address ethical precursors to or core concepts of information ethics. Although chapter presentations vary slightly, each is divided into a conceptual introduction that provides the reader with central ideas and key terminology, an intellectual history that discusses how the concept developed over time, an overview of major thinkers who have contributed to the concept, continuing issues that will be relevant to emerging research, and additional reading lists for further study. When appropriate, one or more case studies are also included to illustrate and concretize principles documented in the chapter.

The chapters can be divided into a few clusters that center on different aspects of information ethics. The first cluster presents a general overview of information ethics as a concept including its history and relationship to human flourishing. The first chapter, by editor John T. F. Burgess, provides an overview of major Western ethical frameworks, and discusses their relevance to information ethics practitioners. Chapter 2, written by Paul T. Jaeger, Ursula Gorham, and Natalie Greene Taylor, is an examination of the concept of human rights and its distinctions from and relationships with the information ethics

discipline. Chapter 3, again by John T. F. Burgess, is a review of the professional ethical precursors that provide lessons in applied ethics and suggest a need for an information ethics distinct from those precursors.

The next cluster of chapters cover specific topics in information ethics. Emily J. M. Knox summarizes the theme of information access in pre- and post-enlightenment modes in chapter 4. Chapter 5, written by Michael Zimmer, covers the principles and intellectual history of privacy. The ethics of discourse is the subject of John M. Budd's chapter 6, including a discussion of conversational analysis ethics. Kathrine Andrews. Henderson contributes chapter 7 on intellectual property ethics, history, and law. Chapter 8, written by Peter Darch, covers data ethics and the emerging topic of big data and data activities. Chapter 9, by Jane Blanken-Webb, Imani Palmer, Roy H. Campbell, Nicholas C. Burbules, and Masooda Bashir, examines cybersecurity ethics, including a look at the influence of hacker culture.

Global and intercultural information ethics are discussed in the final cluster of chapters. Chapter 10, written by Rachel Fischer and Erin Klazar, covers the topics of cognitive justice and intercultural communication ethics, including epistemicide and indigenous knowledge. Margaret Zimmerman's chapter 11 on global digital citizenship takes the concept of global citizenship and considers the implications of networked online communities.

The concluding chapter, written by Amelia Gibson, stands alone. It covers a wide range of emerging issues, from algorithmic bias and AI decision-making to 3-D printing and regulated items.

Taken together, the chapters in this volume serve as a key to understanding the major topics of information ethics and as an invitation for the reader to participate in ongoing discussions as researchers, practitioners, students, and citizens.

John T. F. Burgess
Emily J. M. Knox

Principles and Concepts in Information Ethics

John T. F. Burgess

If, figuratively speaking, ethics is the story of what it means to be good and all the ways humans remain bad, then *information ethics* is the story of the good that can be accomplished with information, and all the ways it may be used to harm. It is a complex story, and as with any complex story, knowing the plot, themes, and characters can take what at first seems impenetrable and make it engaging. The story of information ethics plays out within individuals, among persons, in communities, and even between people and their creations, from social institutions to artificially intelligent machines. Each of us participate in telling this story with actions and with expectations. We turn to social networking sites to learn what happened while we were asleep, we share news articles that we may or may not have read, shop online for things we may or may not need, stream media we may not own even a digital copy of, and message loved ones or people we want to know better. These acts carry expectations about privacy and surveillance, intellectual freedom and social norms, and access to information and intellectual property. Such mundane actions have consequences in aggregate, and even those who reject creating an online presence are still affected by the social, political, and economic choices of those who do.

It is one of the underlying assumptions of this chapter that, rather than leave decisions about the beneficial and harmful applications of information systems to these kinds of aggregate decisions, it is important to reflect on them in a reasoned way. This assumption should not seem out of place to information professionals who have long been invested in the idea that, properly used, information systems provide a transformative public good, which when misused can harm many. The following serves as an introduction to the key elements of the story of information ethics, such as concepts and frameworks information ethicists use to conduct their research that will make information ethics research more engaging. A subsequent chapter deals with the history of information ethics as a discipline. Between these two, the reader should have a foundation for engaging with the remaining chapters of this volume, and more broadly, with information ethics research.

MORAL PHILOSOPHY

Although the terms *morals* and *ethics* are often used interchangeably even by moral philosophers, looking at their etymology over time reveals a useful distinction. The origins of the words overlap, as the Latin word *moralis* means proper social behavior, and the Greek *ēthikós* means practicing moral character. However, in Middle French the words began to diverge: *ethiques* is used to refer to the classical works of moral philosophy and their characteristics, while in post-classical Latin the word *mores* retained the sense of customs. It is with this distinction in mind that one may use *morals* to mean held beliefs and *ethics* to mean a systematic treatment of a moral principle. As an example of this distinction, the limits of one's moral duty (a held belief) to keep a promise are defined by one's preferred ethical framework (a systematic treatment) (*Oxford English Dictionary Online*: s.v. "ethics"; s.v. "moral"). It is not a simple thing to determine what actions are moral. Philosophical research requires a skill set unlike those of other forms of research. Generally speaking, in much experimental research the strength of the research depends on the number of subjects, the control over the experimental environment, and validity and reliability in the design, as well as statistically significant results. In philosophical research methods the primary instrument for generating new understanding is rigorous argumentation supported by logical analysis, models, examples, and thought experiments, among other things. Arguments are not made for the sake of the art of argumentation but are instead applied to achieve deeper, more nuanced understandings of the topic being argued. Experimentation has long since superseded argumentation as a way to know reliably how the natural world functions, yet one only has to look at the comments section of a social media post to know that this has not stopped people from using argumentation to engage with complex problems. Philosophies of empiricism from David Hume's *An Enquiry into Human Understanding* (Hume 1999) to Thomas Kuhn's *The Structure of Scientific Revolutions* (Kuhn and Hacking 2012) have also made it clear that argumentation is an integral part of interpreting experimental significance. Factual evidence alone is not enough to be sufficiently persuasive on issues of the physical world, much less on questions of what moral obligations we hold to one another. Learning to use argumentation more effectively can be an exercise in digital citizenship, the capacity to act responsibly in an online environment (Mossberger, Tolbert, and McNeal 2007, 1). Engaging with rigorous argumentation as a research method will reinforce the abilities to think critically about the substance of arguments, to discredit poor or bad faith arguments, to clarify and refine strong ones, and to increase the likelihood of good outcomes for projects implemented from them. For example, the Association of College and Research Libraries' Framework for Information Literacy is the outcome of a vigorous argument on how information literacy instruction should be performed (Beilin 2015).

Philosophy is a research method, but it is also a scholarly discipline that is divided into countless subdisciplines. Some of these are based on a desire to understand a concept better; these include *metaphysics*, the philosophical study of reality; *epistemology*, the philosophical study of truth; and *aesthetics*, the philosophical study of beauty. Information ethics resides within the subdiscipline of *moral philosophy*. Moral philosophy is concerned with the philosophical study of the good. In other words, what makes conduct good or bad, right or wrong? The "what makes" portion of that definition is important, because moral philosophers often focus their work on finding justified beliefs or *principles* that can be generalized enabling us make better, more moral decisions. Generations of moral philosophers have developed iterative arguments about what gives moral authority to principles, dividing moral

philosophy into a variety of explanatory frameworks, each with a genealogy of supporters. A later portion of this chapter is devoted to familiarizing the reader with the four most prominent kinds of moral authority conceived in these frameworks.

INFORMATION ETHICS

An effective way to define information ethics is to encircle it and gain a sense of the territory it covers. If moral philosophy may be called a systematic exploration of the concept of goodness, then information ethics is that exploration dedicated to the domain of information. This is comparable to the way bioethics explores goodness as confined to the domain of living things. Both life and information concern broad conceptual territories, and both require careful definition in order to clarify where those boundaries lie. There are many definitions of information, each with its own merits. For the current task, recognizing that many distinctions may be made in how information is defined is more important than unpacking the meanings of those definitions. The distinction process begins with Claude Shannon's expression of information as signal fidelity rather than semantic, or meaningful, fidelity (Shannon 1948, 623). Marcia J. Bates effectively reviews the range of distinctions typologically as "Communicatory or semiotic, Activity-based (i.e., information as event), Propositional, Structural, Social, Multitype, and Deconstructionist" (Bates 2009, 2347-48). The philosophy of information (PI) is its own subdiscipline within philosophy, examining the metaphysical nature of information (Floridi 2002; 2011). Awareness of the breadth and complexity of the concept of information should encourage readers of information ethics to take the time to unpack how authors are using that concept, both in terms of which definitions they include and which they exclude.

The conceptual breadth of information is one of the boundary-setting challenges in establishing information ethics' domain. Another challenge is that information ethics addresses moral issues that arise from the implementation of new information and communication technologies (ICTs), and innovation in ICTs can be broadly disruptive. For example, principles towards privacy worked out to address the social, political, and economic ramifications of the manual printing press and the postal system are insufficient to deal with an environment where, once posted online, sensitive items may persist indefinitely, decentralized outside of the direct control of any authority (Rosen 2011). By the time a principle has been established, innovation may require revision. This makes information ethics an applied ethics, one that is concerned less with timeless truths and more with unpacking implications and guiding implementations of information systems.

A final boundary-setting challenge is that globally networked information systems are not the territory of any one nation, religion, or culture, and therefore promote cosmopolitanism, the belief that although we are all connected, differences between people are real, legitimate on their own terms, and should be respected (Beck and Sznaider 2006). Information ethical solutions should reflect the fact that as a result of pluralism and generational shifts, there is not likely to be one set of answers to what constitutes morally permissible uses of information. For this reason, not only is the definition of information broad, but the range of ethical standards to consider must be equally broad in order to arrive at useful principles. Despite this, information ethics may still provide *normative*, or morally guiding, principles. These should be responsive to innovations and receptive to the importance of decentralizing philosophy to remain relevant and resistant to a rise in nativist or nationalistic thinking (Narayan and Harding 2000).

With these three parameters in place, it is possible to see information ethics as an applied ethics, dedicated to negotiating the moral terrain between emerging information and communication technologies, the pervasive information systems supported by those technologies, and the deeply interconnected world that is dependent on the information provided by those systems.

INTELLECTUAL HISTORY

This intellectual history briefly summarizes four Western ethical frameworks: *deontology*, *consequentialism*, *character ethics*, and *contractual ethics*. It does so in a way that presents each framework as a moral lens, a way to interpret the world if a certain set of ethical principles are true. Such a lens is called a *hermeneutic*. Viewing a problem with a new hermeneutical lens may aid in creative analysis and facilitate discovery of fresh insights, so it is beneficial to have a range of hermeneutics available beyond one's own personal moral preferences. Ethical frameworks are non-rivalrous in the sense that one does not owe personal allegiance to a system of ethics the way one might to a religious tradition or even a political movement. Nor should these frameworks be seen as a comprehensive list in any way. These four frameworks are encountered widely in information ethics literature but represent only a fraction of global moral and wisdom traditions. Significant contributions to information ethics from African, Asian, and South American traditions are introduced in subsequent chapters, where they can be explored more fully. The decision to present European ethical traditions first should not be interpreted as evidence of their quality or sophistication relative to other traditions. Instead it is a legacy of colonialism that Western ideas have dominated the available ways to discuss the relationship among information, technology, and the needs of people. By necessity even these four traditions are given broad treatments. Suggested readings in this and subsequent chapters will provide guidance to primary source documents.

Deontology

Into early modern European history, living a good life meant being religiously pious. After the Protestant reformation, the question of which interpretation of piety was correct became a pressing concern and the answer often had more to do with political rather than moral authority. Enlightenment-era philosophers, inspired by the way that empiricism enabled understanding of nature, began to wonder if reasoned inquiry could also lead to understanding the moral order. One of the most influential attempts to create a rational foundation for ethics is *deontology*. The word deontology comes from the Greek and means the study of what is necessary, in the sense that something ought to be done rather than the sense of being required. This focus on necessary action results in deontology being known as the ethics of *duty* or of *rules*. The towering figure of the Enlightenment, German philosopher Immanuel Kant (1724–1804) argued that these rules could be discovered in an *a priori* way, that is before or without experience, in the same way that we know mathematical or logical truths. A rule that is said to be universally true is known as a *maxim*. Moral rules that could be reduced to practical concerns, needs born of circumstance, were not maxims and could not be considered good in and of themselves. Maxims function in a similar way to religious commandments, setting the boundaries of moral acceptability.

In this framework, a rule may be called moral if it can be applied universally: what is moral for a king is moral for a pauper, in every circumstance. Additionally, one must treat people as ends instead of means to achieve an end. Finally, for a rule to be moral, it must leave room for the agency of others, because rather than be obedient to rules, the person should be guided by a well-developed moral *conscience* or *goodwill* towards doing what is right. These standards form the basis of deontological moral authority, what Kant called the *categorical imperative*. Deontology then is a *normative* form of ethics, meaning that it seeks to define which actions are right and which are wrong. The identification of maxims, justified by the categorical imperative means that even those who do not develop a conscience may be judged for carrying out wrong action. Observance of moral rules, such as “it is wrong to kill, steal, or lie,” then becomes the objective marker that one can use to evaluate the behavior of others.

Applying Deontology

To the modern mind, the idea of a reductive moral order that existed in a pure way outside of context may be difficult to accept. For Kant’s contemporaries, this justified a strongly held belief that moral values were absolute, and anything that was not absolute could not be moral. Even if this idea is based on assumptions we no longer hold, the legacy of Kantian ethics is still with us in the idea that ethics can be applied universally. It can be seen in the idea of universal human rights and other natural rights arguments (Freeman 2017, 27). It is also present in the form of professional codes of ethics. Even without using exclusively a priori proof of ethical principles, codes of ethics are presented in a way that is meant to create a universal standard for conduct (L’Etang 1992, 738). Information professionals who view privacy, access to information, and intellectual freedom as universal human rights and see it as their duty to protect them are operating in a deontological ethical framework. Refusing to treat their patrons as means instead of ends and respecting their agency and autonomy is also a legacy of deontological thinking. The objective and shared nature of rules make deontology well-suited to serve as the basis for professional codes of ethics. This is particularly true for those professions without the centralized authority to enforce ethical behavior because those who believe that their professional ethics are universal and promote dignity may be more likely to defend them than those who feel they are arbitrary or even situational.

Limitations of Deontology

At times, two or more maxims will conflict with each other, which calls into question the assumption of a moral order. An *ethical dilemma* occurs when multiple maxims ought to be applied universally but are contradictory. This is distinct from a moral crisis or quandary, when it is difficult to apply a single maxim in a satisfactory way. Reconciling a dilemma requires either proving that the rules involved do not actually contradict or introducing the possibility that some criteria beyond reason is necessary in making moral evaluations, establishing a need for other ethical frameworks. Few modern deontologists are Kantian absolutists, and modern forms of deontology add elements to make it possible to determine which rule is given priority in terms of value, importance, or some other standard, such as consistency (Marcus 1980, 135).

A more difficult limitation to accommodate is the so-called *moral disaster*. If a maxim is universally moral then breaking it, even to avoid a disastrous outcome, must be considered immoral. One of the reasons to employ an ethical framework is to guide people to do the right thing, so it seems counterintuitive to call a decision moral if the outcome of that act leads to great suffering. This may make sense if there are theological consequences to acting immorally, but otherwise it seems to place the moral conscience of one person over the well-being of many others. Contemporary deontologists have proposed solutions for these limitations, such as Frances Kamm's *Principle of Permissible Harm* (Kamm 2007, 5). In the context of this chapter, knowing potential resolutions is less important than knowing what spurred the development of additional ethical frameworks, and the presence of moral dilemmas, the immunity of morality from consequences, and the focus on individual morality did so for deontology.

Major Thinkers

Immanuel Kant (1724–1804). German founder of rules-based deontology and leading figure of the Enlightenment. One of the most influential ethicists and philosophers of the past four centuries.

John Locke (1632–1704). English philosopher and empiricist who articulated deontology from a rights-based approach, positing that a creator had fashioned natural laws from which human beings could not be alienated.

Thomas Nagel (1937–). American philosopher of mind who laid out a distinction between what are now known as *agent-relative* and *agent-neutral* reasons. Something is considered agent-neutral if it would be good for all persons, substituting for the universality requirement. Something is agent-relative if circumstances might change our evaluation of an otherwise universally moral or immoral decision (Nagel 1978, 120). This addresses the moral disaster problem by recasting how reason is used to identify rules.

Frances Kamm. American applied ethicist, active in the twentieth and twenty-first centuries, who developed the Principle of Permissible Harm, a refinement of deontology. This is the argument that principles can be constructed from an aggregate of case-based judgments, creating a normative rule from experience rather than from an *a priori* judgment. This is done in a way that uses the substitution of persons in a conflict to minimize individual preferences (Kamm 2007, 4–5).

Consequentialism

The second ethical framework to consider is *consequentialism*, which in many ways should be seen as a response to the limitations of deontology raised above. A *consequence* is something that results from a deliberate action or choice. Consequentialism, then, is the ethical framework that bases the determination of what is moral on the consequences of choices. For example, it may or may not be immoral to tell a lie, depending on the outcomes of that

lie. The moral weight does not reside in the act, but in the consequences of the act. There are many forms of consequentialism, but under *act consequentialism*, a core version, judgment occurs entirely after the fact, rather than before. In deontology the morality of a decision is known before the results of an action by applying moral maxims, but under act consequentialism morality is known using evidential proof. It requires no *a priori* judgments, instead taking the circumstances of decisions into account.

What distinguishes consequentialism from *casuistry*, the ethical evaluation of cases by circumstance and precedent alone, is the existence of a consistent measure for evaluating acts. Originally the moral measure of an act was determined by its *utility* or capacity to do the greatest good for the greatest number. A measurable indicator of utility is *hedonism* or maximizing pleasure and minimizing pain. The value of hedonism is that it is a natural function of living beings, in some way harkening back to natural law as proof of its validity. It is also seen as an *intrinsic good*, or something that is good in and of itself. Those who promoted maximizing utility were known as *utilitarians*, including English social reformer Jeremy Bentham (1748–1832), English empiricist John Stuart Mill (1806–1873), and English moral philosopher Henry Sidgwick (1838–1900). Setting hedonism as the standard measure for utility was controversial from the beginning due to distaste for the idea of a life spent pursuing pleasures and resulting in discussions over whether quantity of pleasure was all that mattered, or if some measures of quality could be included. Over the decades many ideas for measures of intrinsic good have been introduced, including human welfare (Sen 1979, 471) and expanding human capabilities (Nussbaum 2001). Some versions of consequentialism feature multiple ideas for the good, which may come in one of multiple forms including lists of moral values or even sets of rules. The one idea that connects all forms of consequentialism is that regardless of how measures occur, evaluation of morality takes place after the act, not before.

Applying Consequentialism

Consequentialist arguments do not depend on belief in an underlying, metaphysical moral order. Nor is it necessary to determine a set of moral norms before actions can be taken with confidence. As long as one has a clear standard for measuring the outcomes of a decision, even if that standard is simply to minimize harm while maximizing the number of happy people, judging outcomes is possible. This gives consequentialism two attractive characteristics: assessability and flexibility. In an environment where change is a near-constant, a framework of predetermined principles may be difficult to apply to unforeseen circumstances, for example, being able to respond to new technologies like facial detection software that have both desirable and troubling applications. A framework that can be objectively assessed can be evaluated without all parties having to share the same moral outlook on the world, which is useful in a pluralistic society. Consequentialist dilemmas involve choosing between multiple good or multiple bad outcomes, which are not paradoxical unlike deontological dilemmas. Likewise, moral catastrophes are also of no concern because the disastrous outcome would be the evidence that a decision was immoral.

Information professionals who use consequentialism may identify intrinsic goods against which to measure utility. This might be something akin to Melvil Dewey's *library faith*, the belief that access to high-quality reading material is intrinsically good and will have positive effects on individual patrons and on society (Wiegand 1999, 4). Assumptions about what constitutes the best reading and the positive effects of reading are culturally biased and flawed, but the library faith is still echoed in established values such as intellectual

freedom and access to information as ideas that have utility and should be maximized. These ideas of the good would still be evaluated circumstantially. For example, even if intellectual freedom is intrinsically desirable, allowing internet filters to be installed on public computers may be necessary in order to maintain access to US federal E-Rate funding (Dresang 2006, 180). If loss of funding would result in massive service cutbacks or even closures, which would be the moral course of action? Consequentialist thinking would allow practitioners the autonomy to apply professional values rationally in a given circumstance while maintaining a moral obligation seek the best outcome.

Limitations of Consequentialism

Consequentialism is susceptible to the argument that it is an ethics of calculation and relativism. Additionally, it is worthwhile to recognize that sometimes the means are important, not just the ends, because part of moral identity is aspirational. Then there is the problem of judging consequences. One cannot know consequences until after the act has already occurred, and because it is impossible to know all of the remote consequences, judgment is necessarily incomplete. In recognition of this, a consequentialist does not attempt to forecast all of the consequences of an action before making a decision. Instead, these decisions are made using experience from the outcomes of prior decisions and using moral intuition to choose what seems like the right thing to do. The first mitigates consequentialism's advantage in novel situations, whereas moral intuition is inherently subjective, thus qualifying the benefits of objectivity.

Additional limitations arise from the idea of an intrinsic good because the idea of goodness is culturally and generationally dependent. For example, who decides if sensual pleasure is an intrinsic good or if refined, epicurean pleasure is better? What about the library faith? This is another mark against consequentialism's objectivity. As mentioned above, there are many forms of consequentialism with titles such as *actual consequentialism*, *total consequentialism*, and *universal consequentialism*. One of the factors leading to the development of new forms was the need to accommodate instances when an intrinsic good, or when measuring the good, turned out to be problematical. If the good and the standard for measuring it are both arbitrary, it becomes even harder to repel objections of relativism. A further limitation is that seeking to maximize a good may lead to difficulties in itself. Even if a good is intrinsic, there is no strong justification that it will still be good if maximized. The appropriately named "Transplant Problem" provides one example of why this may not be the best approach. The transplant problem is a thought experiment where a doctor chooses to save the lives of several patients by transplanting the vital organs of a healthy person into them (Thomson 1985, 1410). Maximization may require consequentialist observers to judge this act as moral even though most observers would consider it abhorrent. Consequentialists have developed approaches to compensate for this thought experiment, but ultimately neither deontology nor consequentialism are simple to adopt as a single lens since both means and consequences carry moral weight.

Major Thinkers

Jeremy Bentham (1748-1832). English early proponent of secular utilitarian thought. Social reformer. Published texts applying utilitarian principles to penal law and the principles of good governance.

John Stuart Mill (1806–1873). English philosopher and empiricist who expanded Bentham’s ideas of hedonism to include qualitative distinctions. Brought utilitarian thought to the economic, social, and political values of classical liberalism.

Bernard Williams (1929–2003). English moral philosopher who was one of the most influential critics of consequentialism. Introduced a critique on the basis of *negative responsibilities*, the principle that one might be responsible for what one does not do as well as what one does. He also raised the issue of the importance of agent integrity in the moral process and the damage caused in reducing moral decision-making to a calculation.

Peter Singer (1946–). Australian moral philosopher who in his “Drowning Child” thought experiment explored the implications of negative responsibilities for society. If one has the moral responsibility to save a drowning child who is in front of us, might that not mean that through an expanding circle of responsibility we also are responsible for the welfare of all those who we could save?

Character Ethics

Character ethics is both older and newer than the first two ethical frameworks presented above. It is older because many of the ideas in this framework come from classical Greek philosophers such as Aristotle and Plato. However, it fell out of wide practice during the Enlightenment in favor of the search for an objective moral order, only to be revived in the mid-twentieth century by British analytic philosopher and ethicist Elizabeth Anscombe (1919–2001) and British virtue and meta-ethicist Philippa Foot (1920–2010), among others. The reintroduction provided a third way to think about moral philosophy, breaking the gridlock between deontologists and consequentialists that was prevalent at the time. *Character* is a set of stable but not immutable qualities, often related to a person’s moral faculties or disposition. In this framework, one considers what a person of good character would do in a given situation and seeks to emulate that person. This may seem arbitrary, but it recognizes the social dimension of morality, particularly the influence of family and community (Blum 1998, 164). Certain values are held up as being laudable in one’s culture, and to be a trusted member of that culture requires the ability to act according to certain norms. There is no moral obligation to adopt them, but rejecting the values of one’s community may make life more difficult.

The traditional form of character ethics is *virtue ethics*. In virtue ethics one cultivates a good character by practicing the *virtues* while minimizing corresponding *vices*. The Greek word for virtue, *arete*, means excellence, so practicing virtue suggests pursuing excellence rather than seeking an intrinsic good. Many forms of character ethics identify *flourishing* as the indicator of a well-lived life, not moment to moment, but in totality. To flourish means to grow and thrive in the way that one might describe a healthy farm or a community as flourishing. The Greek word for flourishing is *eudaimonia*, and forms of character ethics that promote flourishing are called *eudaimonic ethics*. For character ethics it is not the dutiful person but the *prudent* person who is good. Prudence is a form of self-control guided by practical wisdom. The prudent person pursues the *golden mean*, or middle ground between

two moral extremes. For example, on a continuum between caution and bravery, an excess of caution may lead to the inability to act at a critical moment and an excess of bravery may lead to taking foolhardy risks. Building a habit of prudence is an essential part of developing good character. Virtue ethics is summarily to emulate those people one considers laudable and develop a prudent character by habituating the moral virtue, to better the odds of flourishing over the course of a lifetime.

Applying Character Ethics

Character ethics shares characteristics with both deontology and consequentialism. In character ethics, the virtues provide a standard for ethical decision-making that is more comparable to the way rules work in deontology than to the function of intrinsic good of consequentialism. Both rules and virtues are explicitly meant to provide guidance during the decision-making process. Flourishing, on the other hand, provides an objective to maximize similar to the one provided by the intrinsic good in consequentialism. Practitioners of deontology and virtue ethics both seek to develop a stable, guiding disposition: moral conscience for deontology and prudent character for virtue and other character ethics. Like consequentialism, eudaimonic character ethics does take into account the moral consequences of actions, in particular are they more or less likely to promote flourishing, but having a good character is the moral good, and flourishing is only the desired outcome, so although one cannot ensure flourishing, one can still seek to always be a person of good character.

The information professional employing a virtue ethics lens is likely to look to exemplars of virtue in the profession and emulate their approaches. Here, the profession as a whole may serve as the community, providing both virtuous exemplars and expectations to follow. In this way, there is a social element that is not emphasized in the previous two frameworks. This has implications for professional education because this places a premium on modeling ethical behaviors as well as providing functional instruction. Beyond this, the idea of the golden mean can inform the performance of ethical duties. For example, seeing social responsibility and neutrality as two virtues to be balanced may lead to adopting prudential, rather than competing, strategies (Burgess 2016). Finally, the idea that continued flourishing should not be seen as a direct goal to pursue, but rather is a condition one invites through acting virtuously and prudentially, provides a further justification for placing those virtues ahead of other immediate concerns. For example, protecting privacy, providing access to information, and defending intellectual freedom, rather than being the moral goals themselves, may be virtues to pursue because doing so helps to define an essential professional character, and developing that character is what gives the profession the best chance to flourish (Burgess 2013).

Limitations of Character Ethics

There are potential limitations associated with a normative ethical framework that lacks specific moral principles. The distinction between moral rules and the virtues is that breaking a moral rule is a *transgression*. To transgress is to go beyond a set boundary, in other words, to do something unacceptable or, in this case, immoral. It is a wrong action, and doing a wrong action carries a negative moral judgment, including any accompanying sense of guilt or shame. Pursuing a vice instead of a virtue is not transgressive; instead, it is considered *akratic*, acting against one's self-interests in an undisciplined way. It is a missed

opportunity to build character and invite flourishing. An approach such as virtue ethics that does not set hard behavioral boundaries frees the moral agent to think about the overall goal of becoming a person of good character.

This leaves virtue ethics open to charges of *egoism*, or excessive focus on the moral trajectory of the individual, instead of developing principles or ideas of the good that can be used by everyone. The *ethics of care*, a feminist approach to character ethics, emphasizes the importance of relationships rather than individual flourishing as a response to this limitation (Held 2006, 19). The second and related limitation is that flourishing is a personal goal, and if no particular actions are purely transgressive, then one may be tempted to act in ways that an external observer might consider immoral in order to pursue one's idea of flourishing. Although originally character was developed in a tightly knit community where that community could keep a person in line with social norms, modern society is more anonymous. A final limitation is that even if one lives a virtuous and habitually prudent life, flourishing is often a result of circumstances and is not guaranteed, leaving a strong disconnect between moral behavior and reward. The deontologist's reward is a clear conscience, the utilitarian's is the pursuit of pleasure, while the virtue ethicist's may only be a life of disciplined moderation.

Major Thinkers

Aristotle (384–322 BCE). Greek philosopher whose work framed much of pre-Enlightenment Western philosophy and established many of the concepts and domains of study that are core to Western philosophical inquiry.

G. E. M. Anscombe (1919–2001). British analytic philosopher and ethicist. Through her 1958 essay “Modern Moral Philosophy,” she spoke of the shortcomings of moral philosophy in the first half of the twentieth century and made the case for an ethical foundation that relies on something beyond appeals to morally normative assertions in ways that have more in common with religious obligations than Aristotle's ideas of virtue.

Philippa Foot (1920–2010). British virtue and meta-ethicist who promoted virtue ethics as a normative alternative to consequentialism and deontology.

Rosalind Hursthouse (1943–). New Zealander moral philosopher who has popularized virtue ethics, as well as developed applied theories of virtue ethics, while giving special attention to issues of abortion and moral motivation.

Alasdair MacIntyre (1929–). Scottish moral philosopher whose influential 1981 book *After Virtue* applied Aristotelian ethics to critique both the Enlightenment era conception of human nature and individualist ethics.

Robert Louden (1935–). American ethical theorist who illustrated that virtue ethics is an egoistic form of ethics, which is effective in outlining how individuals may develop moral qualities but is insufficient to resolve moral quandaries in society.

Contractual Ethics

The final major Western ethical framework to be considered in this chapter begins with the idea that it is possible for members of a society to agree on a standard of moral behavior without having to derive the authority to do so from anything except mutual self-interest. In this framework, members of a society collectively agree on what is moral, which requires the belief that it is rational for people to agree that shared morals are beneficial. The value of this approach is particularly clear in pluralistic societies where many different cultures hold standards of right and wrong behavior. The political philosophical framework for this line of thinking is called the *social contract*. Classical social contract theory proceeds from the idea that legitimate rule relies on the consent of the governed, rather than divine right, to form a stable civil society. English political philosopher Thomas Hobbes (1588–1679) argued in his work *Leviathan* that consent should be given because the alternative is an anarchic war of all against all, which is even less tolerable than being ruled by a monarch. It can be considered rational to give up certain freedoms in exchange for protection of person and property.

The moral philosophical version of this idea is called *contractual ethics*, which consists of both *contractarianism* and *contractualism*. In contractarianism one's theory of human nature is based on rational self-interest, as per Hobbes, and it is considered worth giving up certain freedoms in exchange for shared moral protections. In contractualism, one's theory of human nature is based on the dignity of persons to accept a persuasive moral argument, as with American moral philosopher T. M. Scanlon (1940–) (1982, 128). One of the most prominent examples of something that is both a moral protection and a persuasive moral argument is the principle of *justice as fairness*, articulated as an overlapping consensus of philosophical and religious positions by American moral philosopher John Rawls (1921–2002) (1985, 225–26). Versions of moral contract theory promoted by Enlightenment era thinkers like political philosopher Jean-Jacques Rousseau (1712–1778) focused on this idea of consent as a binding process where people are born free but exchange that freedom for services (Rousseau 2012, 157). However, modern contractual ethics focuses not on ways that people may bind themselves to one another, but instead on finding those principles that all parties would agree to uphold.

Applying Contractual Ethics

Under contractual ethics, reason aids in identifying upholdable principles, rather than finding rules a person must commit to and obey. The goal is to better understand rational positions that could be agreed upon, rather than demonstrating actual agreement. As mentioned above, Thomas Hobbes's contractarian argument that civil society is rational because it is in everyone's interest to stave off a war of all against all is an example of *rational self-interest*. This is a libertarian idea that acting in accord with one's self interest is enough to deem a decision rational. Designing a moral contract where all pursued their self-interests might lead to a system being seen as moral as long as it preserved individual liberties and staved off a more undesirable condition. Compare this to the most influential example of a contractualist model, Rawls's *original position*. In the original position, Rawls argues that if we were re-creating society and all knowledge of a person's living conditions were hidden behind the *veil of ignorance*, then everyone would choose to create a state that would provide basic living needs for everyone rather than risk being impoverished and

powerless (Rawls 1999). In this way, most arguments from contractual forms of ethics rely on either making a reasoned argument that everyone would agree with or on showing that through self-interest alone one would choose to create a system of morality.

The information professional employing a contractarian lens is likely to look for how professional values could be justified by arguments of rational self-interest alone. Michael Harris's account of the founding of the public library movement as an exercise of rational self-interest by cultural elites would be one example of a contractarian approach (Harris 1972). An information professional using a contractualist lens might try to craft a reasoned model for professional practice to which everyone would be able to agree. For instance, it might be rational for everyone to agree to a principle protecting intellectual freedom because doing so creates a moral environment where we are free to explore ideas without fear of censure. A contractarian version of the same principle might be that in order to protect one's own ability to speak freely, one would give up the right to censor other people's ideas. In general, the benefit of employing a contractual ethics lens is that it removes the potential for hypocrisy from the contingent nature of ethical frameworks. It emphasizes how greatly ethical frameworks rely on agreement, and how it is possible to revise moral contracts collaboratively. This extends both to the services provided by information professionals and the social responsibilities for which they advocate.

Limitations of Contractual Ethics

In contractual ethics, there are no actual contracts involved, so nothing is binding, and nothing exists to assent to. These frameworks may be seen as a form of ethical thought experiment, designed to help those reflecting on why one would agree to the things one already has. Contractual ethics, like consequentialism, is not designed to help one make moral decisions in the moment. The arguments used to make a case tend to be hypothetical, often applying models removed not just from direct experience, like a thought experiment, but also from even the possibility of experience. Consider Rawls's original position, which requires everyone to be ignorant of his or her own circumstances in order to reach agreement. This is called the *standard indictment*: hypothetical contracts cannot lead to real, binding agreements (Stark 2000, 314). They are also prone to confirming that the things that one already believes to be moral are moral, making it difficult to challenge preconceptions. For example, if one is already persuaded that rational self-interest makes sense, then moral contracts based on self-interest will be judged valid. The same holds true for welfarist moral contracts.

Major Thinkers

Thomas Hobbes (1588-1679). English political philosopher whose book *Leviathan* is the foundation of political social contract theory. In this theory, a strong civil society is needed to save human beings from dwelling in a combative state of nature.

Jean-Jacques Rousseau (1712-1778). Genovese Swiss political philosopher who contributed to the idea of premoral natural rights and the relationship among those rights, social contracts, and human endeavors.

John Rawls (1921–2002). American moral philosopher best known for developing justice as fairness as a contractualist principle, securing a politically liberal argument for a welfarist position.

T. M. Scanlon (1940–). American moral philosopher who articulated the contractualist position and how it can be distinguished from the contractarian position.

David Gauthier (1932–). Canadian-American contractarian philosopher whose work rekindled interest in contractual ethics in the twentieth century. Promoted the idea of the *initial bargaining position* as an alternative to the Enlightenment era state of nature (Gauthier 1986, 130).

CONTINUING ISSUES AND CONCERNS

As will be evident in subsequent chapters in this volume, no single ethical framework will be sufficient to address the variety of issues raised in information ethics research and practice. This is because ethical frameworks are an abstraction from the world as lived experience, resigned to explain one or more facets of the story of what it means to be good. This insufficiency does not mean that coming to know more about these ethical frameworks is without merit. Each raises issues about how it is possible to label one act moral and another immoral, one beneficial and the other detrimental. By presenting these Western ethical frameworks in a non-rivalrous way, they may be used as required, overlapping to fulfill a given need. If assistance in decision-making is essential, understanding deontological tests of means or virtue ethics' emphasis on prudence may provide guidance. When assumptions about the underlying morality of an aspect of society needs to be called into question, the language of moral contracts will be available. When concepts are presented as intrinsic goods, one should be as skeptical of them as consequentialists critiquing each other's expressions of the good. Moral philosophy cannot provide absolute answers, but it can facilitate asking more sophisticated questions. Having these four hermeneutical lenses in place to interrogate ethical arguments will facilitate engaging both with the information ethics concepts presented in the remainder of this work and in wider practice.

REFERENCES

- Bates, Marcia J. 2009. "Information." *Encyclopedia of Library and Information Sciences*. Boca Raton, FL: CRC Press. <https://www-taylorfrancis-com.libdata.lib.ua.edu/books/e/9780849397110>.
- Beck, Ulrich, and Natan Sznajder. 2006. "Unpacking Cosmopolitanism for the Social Sciences: A Research Agenda." *The British Journal of Sociology* 57 (1): 1–23.
- Beilin, Ian. 2015. "Beyond the Threshold: Conformity, Resistance, and the ACRL Information Literacy Framework for Higher Education." *In the Library with the Lead Pipe* (blog). February 25, 2015. www.inthelibrarywiththeleadpipe.org/2015/beyond-the-threshold-conformity-resistance-and-the-acrl-information-literacy-framework-for-higher-education/.
- Blum, Lawrence. 1998. "Community and Virtue." In *How Should One Live?: Essays on the Virtues*, edited by Roger Crisp, 163–78. Oxford, UK: Clarendon Press.
- Burgess, John T. F. 2013. "Virtue Ethics and the Narrative Identity of American Librarianship 1876 to Present." PhD diss., Tuscaloosa, AL: University of Alabama Libraries.

- _____. 2016. "Reconciling Social Responsibility and Neutrality in LIS Professional Ethics: A Virtue Ethics Approach." In *Information Cultures in the Digital Age: A Festschrift in Honor of Rafael Capurro*, edited by Jared Bielby and Matt Kelly, 161–72.
- Dresang, Eliza T. 2006. "Intellectual Freedom and Libraries: Complexity and Chance in the Twenty-First-Century Digital Environment." *Library Quarterly*, 169–92.
- Floridi, Luciano. 2002. "What Is the Philosophy of Information?" *Metaphilosophy* 33 (1–2): 123–45.
- _____. 2011. *The Philosophy of Information*. Oxford ; New York: Oxford University Press. www.blackwellpublishing.com/pci/downloads/introduction.pdf.
- Freeman, Michael. 2017. *Human Rights*. Cambridge, UK: Polity Press Cambridge.
- Gauthier, David. 1986. *Morals by Agreement*. Oxford: Clarendon Press.
- Harris, Michael H. 1972. "The Purpose of the American Public Library in Historical Perspective: A Revisionist Interpretation." Washington, DC: ERIC Clearinghouse on Library and Information Sciences. www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED071668.
- Held, Virginia. 2006. *The Ethics of Care: Personal, Political, and Global*. Oxford ; New York: Oxford University Press, USA.
- Hume, David. 1999. *An Enquiry Concerning Human Understanding*, edited by Tom L. Beauchamp. Oxford; New York: Oxford University Press.
- Kamm, Frances Myrna. 2007. *Intricate Ethics: Rights, Responsibilities, and Permissible Harm*. Oxford; New York: Oxford University Press.
- Kuhn, Thomas S., and Ian Hacking. 2012. *The Structure of Scientific Revolutions: 50th Anniversary Edition*. 4th ed. Chicago ; London: University of Chicago Press.
- L'Etang, Jacquie. 1992. "A Kantian Approach to Codes of Ethics." *Journal of Business Ethics* 11 (10): 737–44. <https://doi.org/10.1007/BF00872305>.
- Marcus, Ruth Barcan. 1980. "Moral Dilemmas and Consistency." *The Journal of Philosophy* 77 (3): 121–36. <https://doi.org/10.2307/2025665>.
- Mossberger, Karen, Caroline J. Tolbert, and Ramona S. McNeal. 2007. *Digital Citizenship: The Internet, Society, and Participation*. Cambridge, MA: MIT Press.
- Nagel, Thomas. 1978. *The Possibility of Altruism*. Princeton, NJ: Princeton University Press.
- Narayan, Uma, and Sandra Harding. 2000. "Introduction." In *Decentering the Center: Philosophy for a Multicultural, Postcolonial, and Feminist World*, vii–xvi. Bloomington, IN: Indiana University Press.
- Nussbaum, Martha C. 2001. *Women and Human Development: The Capabilities Approach*. Cambridge, UK: Cambridge University Press.
- Oxford English Dictionary Online*. s.v. "ethics (n)." www.oed.com/view/Entry/355823?
- _____. s.v. "moral (n)." www.oed.com/view/Entry/122085.
- Rawls, John. 1985. "Justice as Fairness: Political Not Metaphysical." *Philosophy and Public Affairs*, 223–51.
- _____. 1999. *A Theory of Justice*. Revised ed. Cambridge, MA: Belknap Press of Harvard University.
- Rosen, Jeffrey. 2011. "Free Speech, Privacy, and the Web That Never Forgets." *Journal on Telecommunications and High Technology Law* 9 (2): 345.
- Rousseau, Jean-Jacques. 2012. *Rousseau: The Basic Political Writings: Discourse on the Sciences and the Arts, Discourse on the Origin of Inequality, Discourse on Political Economy, . . . Contract, The State of War*. Edited by David Wootton. Translated by Donald A. Cress. 2nd ed. Indianapolis, IN: Cambridge: Hackett Publishing Company, Inc.
- Scanlon, T. M. 1982. "Contractualism and Utilitarianism." In *Utilitarianism and Beyond*, edited by Amartya Sen and Bernard Williams, 103–28. Cambridge: Cambridge University Press. <http://sites.google.com/libdata.lib.ua.edu/site/philosophy450/home/ContractualismandUtilitarianism.pdf>.
- Sen, Amartya. 1979. "Utilitarianism and Welfarism." *The Journal of Philosophy* 76 (9): 463–89. <https://doi.org/10.2307/2025934>.

- Shannon, C. E. 1948. "A Mathematical Theory of Communication." *Bell System Technical Journal* 27 (4): 623-56. <https://doi.org/10.1002/j.1538-7305.1948.tb00917.x>.
- Stark, Cynthia A. 2000. "Hypothetical Consent and Justification." *The Journal of Philosophy* 97 (6): 313-34. <https://doi.org/10.2307/2678406>.
- Thomson, Judith Jarvis. 1985. "The Trolley Problem." *The Yale Law Journal* 94 (6): 1395-1415. <https://doi.org/10.2307/796133>.
- Wiegand, Wayne A. 1999. "Tunnel Vision and Blind Spots: What the Past Tells Us About the Present; Reflections on the Twentieth-Century History of American Librarianship." *The Library Quarterly* 69 (1): 1-32.

ADDITIONAL RESOURCES

- Anscombe, G. E. M. 1958. "Modern Moral Philosophy." *Philosophy* 33 (124): 1-19.
- Aristotle. 1999. *Nicomachean Ethics*. Translated by Terence Irwin. Indianapolis, IN: Hackett Publishing.
- Bentham, Jeremy. 1907. *An Introduction to the Principles of Morals and Legislation*. Oxford, UK: Clarendon Press.
- Hobbes, Thomas. 1998. *Leviathan*. Oxford, UK: Oxford University Press.
- Hursthouse, Rosalind. 1999. *On Virtue Ethics*. Oxford, UK: Oxford University Press.
- Kant, Immanuel. 2012. *Groundwork of the Metaphysics of Morals*, translated by Mary J. Gregor and Jens Timmermann. Cambridge, UK: Cambridge University Press.
- MacIntyre, Alasdair C. 2007. *After Virtue: A Study in Moral Theory*. 3rd ed. Notre Dame, IN: University of Notre Dame Press.
- Mill, John Stuart. 2010. *Utilitarianism*. Oxford, UK: Oxford University Press.
- Parfit, Derek. 1984. *Reasons and Persons*. Oxford, UK: Clarendon Press.
- Sidgwick, Henry. 1981. *The Methods of Ethics*. Indianapolis, IN; Cambridge: Hackett Publishing.

INDEX

A

abyssal thinking, 104, 108
academic research
 big data, uses of, 78
 data sharing in, 83–84
access to information, 40
accountability and redress in big data, 85
ACM Code of Ethics and Professional Conduct, 28
act consequentialism, 7
After Virtue (MacIntyre), 11
agent-neutral reasons, 6
agent-relative reasons, 6
aggregation of information as violation of privacy,
 49, 52
Ahlgren, J., 129
AI and bots decision-making, 133–134
akratic behavior, 10–11
Al-Abed, Bana, 121–122
ALA Code of Ethics, 28, 67
ALA Core Values of Librarianship, 28, 29
ALA Freedom to Read Statement, 28, 29
ALA Library Bill of Rights, 28–29
algorithmic bias, 85–86, 127–128
*Algorithms of Oppression: Race, Gender, and Power
in the Digital Age* (Noble), 129
alternative discourses, 104
Amarasingham, Ruben, 133
Amazon, 50, 52, 84
American Library Association (ALA), 20, 22, 28, 40
American Society of Newspaper Editors, 27
angeletics theory of information, 32
Angwin, J., 129
Annan, Kofi, 19
Anscombe, G. E. M. (Gertrude Elizabeth
 Margaret), 9, 11
Apple (Company), 98
applied ethics
 computer ethics, 27–28
 defined, 26
 journalism and media ethics, 27
 library and information science ethics, 28–30

appropriation of information as violation of
 privacy, 49
archiving data, 79
Aristotle, 11, 111
Associated Press, 75
Association for Computing Machinery (ACM), 28, 95
atrocities, global digital citizenship and reporting
 human rights, 121–122
Austin, J. L., 59
authorship in Copyright Act of 1976, 71
autonomy and human subject research and
 experimentation, 80–81

B

Baker, Stewart, 96
Barocas, Solon, 82
Bashir, Masooda, 91
Bates, Marcia J., 3
behavioral targeting, online, 52–53
Bell Pottinger (Company), 111
Belmont Report, 80–81
beneficence and human subject research and
 experimentation, 81
Benhabib, Seyla, 110
Bennett, W. Lance, 118
Bentham, Jeremy, 7, 8, 18, 39
Berne Convention of 1886, 69–70
Biddle, Sam, 131
Bielby, Jared, 31
big data
 accountability and redress, 85
 changes resulting from, 79–80
 complexity as dimension of, 78
 defined, 77–78
 dimensions of, 77–78
 overview, 77
 predictive analytics, 133
 uses of, 78
 value as dimension of, 78
 variability as dimension of, 78

- big data (*cont.*)
 - variety as dimension of, 77
 - velocity as dimension of, 78
 - veracity as dimension of, 78
 - volume as dimension of, 77
- blackmail as violation of privacy, 49
- Blanken-Webb, Jane, 91
- Blogger, 50
- blurring trademarks, 74
- Boler, Megan, 132
- border thinking, 104
- Borgesius, Frederik J. Zuiderveen, 130
- Borgman, Christine L., 77, 82
- bot and AI decision-making, 133-134
- Brandeis, Louis, 47, 49, 50, 54
- breach of confidentiality as violation of privacy, 49
- Britz, Johannes J., 106
- Brown, Gillian, 58
- Budd, John M., 57, 58
- Burbules, Nicholas C., 91
- Burgess, John T. F., 1, 25
- Burke, Peter, 38
- Burnett, Gary, 117
- Buschman, John, 115
- business use of big data, 78

- C**
- Campbell, Roy H., 91
- Camps, R., 130
- Canada Privacy Commissioner, 51
- Capurro, Rafael, 31, 32, 106
- A Carnival for Science: Essays on Science, Technology and Development* (Visvanathan), 107
- case studies
 - on cognitive justice and intercultural information ethics, 110-112
 - on cybersecurity ethics, 97-98
 - on data ethics, 86-87
 - on ethics of discourse, 63-65
 - on global digital citizenship, 118-122
 - on human rights, 22
 - on information access, 41-42
 - on intellectual property ethics, 74-75
- casuistry, 7
- categorical imperative, 5
- Certified Ethical Hacker (CEH), 95
- CFAA (Computer Fraud and Abuse Act), 92, 98
- Chan-Tiberghien, Jennifer, 108-109
- character defined, 9
- character ethics
 - application of, 10
 - consequentialism compared, 10
 - deontology compared, 10
 - egoism, 11
 - ethics of care, 11
 - eudaimonic ethics, 9, 10
 - flourishing, 9, 10, 11
 - golden mean, 9-10
 - limitations of, 10-11
 - major thinkers in, 11
 - overview, 9-10
 - prudence, 9-10
 - transgressions, 10
 - virtue ethics, 9-11
- Chatman, Elfreda, 40
- Chinese government suppressing information and global digital citizenship, 120-121
- Choi, Moonson, 116, 117
- Church, Christopher E., 133
- citizenship defined, 115
- Clarke, Roger, 47, 50
- Clausewitz, Carl von, 97
- Code of Ethics for Librarians and Other Information Workers (IFLA), 29
- Code of Ethics of Archivists, 29-30
- Code of Ethics of Museums, 30
- Code of Ethics of the American Library Association, 28, 67
- Code of Ethics of the IEEE, 27-28
- Code of Ethics of the Society of Professional Journalists, 27
- codes of ethics
 - computer ethics, 27-28
 - journalism and media ethics, 27
 - library and information science ethics, 28-30
 - overview, 25
- Coglianesse, Cary, 134
- cognitive justice
 - defined, 104
 - principles of, 107
- cognitive justice and intercultural information ethics
 - abyssal thinking, 104, 108
 - alternative discourses, 104
 - border thinking, 104
 - case study, 110-112
 - continuing issues and concerns, 110
 - diatopical hermeneutics, 104
 - ecology of knowledges, 104
 - epistemicide, 105
 - Global North, 104
 - Global South, 104
 - grassroots globalization, 105

- hegemonic globalization, 105
 - indigenous knowledge, 105
 - information poverty, 106–107
 - intellectual history, 106–107
 - intercultural information ethics (IIE) defined, 106
 - key terms and concepts, 104–106
 - major thinkers in, 107–109
 - overview, 103
 - social justice, 106–107, 109
 - universalism *versus* relativism, 110
 - Cohen, I. Glenn, 133
 - Coldewey, Devin, 129
 - collection of information and privacy, 49, 50–52
 - community archiving, 30
 - complexity as dimension of big data, 78
 - computer ethics, 27–28, 95–96
 - Computer Fraud and Abuse Act (CFAA), 92, 98
 - “The Conscience of a Hacker” (Blankenship), 94
 - consequentialism
 - act consequentialism, 7
 - algorithmic power and bias and, 86
 - application of, 7–8
 - casuistry, 7
 - character ethics compared, 10
 - consequentialist dilemmas, 7
 - data privacy and, 83
 - data sharing in academic research and, 83–84
 - hedonism, 7
 - information access and, 38–39
 - intrinsic good, 7, 8
 - library faith, 7–8
 - limitations of, 8
 - major thinkers in, 8–9
 - moral catastrophes, 7
 - negative responsibilities, 9
 - overview, 6–7
 - transplant problem (ethical thought experiment), 8
 - utility, 7
 - “Consumers on the Internet: Ethical and Legal Aspects of Commercialization of Personalized Nutrition” (Ahlgren, Nordgren, Perrudin, Ronteltap, Savigny, van Trijp, Nordström, and Görman), 129
 - contractual ethics
 - application of, 12–13
 - contractarianism, 12
 - contractualism, 12
 - initial bargaining position, 14
 - justice as fairness, 12, 14
 - limitations of, 13
 - major thinkers in, 13–14
 - overview, 12
 - rational self-interest, 12, 13
 - social contracts, 12
 - standard indictment, 13
 - conversational analysis ethics, 58–60
 - cookies used for tagging consumers online, 52
 - copyright, 67, 68
 - Copyright Act of 1710 (Great Britain), 69, 70
 - Copyright Act of 1790 (United States), 70
 - Copyright Act of 1976 (United States), 70–71
 - Core Values of Archivists (SAA), 29–30
 - Core Values of Librarianship (ALA), 28, 29
 - Couldry, Nick, 116, 118
 - Crawford, Kate, 81
 - crime prevention and policing as use of big data, 78
 - Cristol, Dean, 116
 - curation of data. *See* data curation
 - Cybernetics* (Wiener), 95
 - cybersecurity defined, 92
 - cybersecurity ethics
 - case studies, 97–98
 - computer ethics, 95–96
 - continuing issues and concerns
 - hacking back, 96
 - hiring formerly convicted hackers, 96
 - ransomware, 96–97
 - cybersecurity professional practice, 94–95
 - defined, 93
 - defining, 92–93
 - hacker ethic, 93–94
 - intellectual history, 93–96
 - major thinkers in, 93–96
 - overview, 91–92
 - philosophical inquiry related to computer and information ethics, 95–96
 - cyberwarfare, 97
- D**
- Darch, Peter, 77
 - data curation
 - archiving, 79
 - destruction, 79
 - dissemination, 49, 53, 79
 - generation, 50–52, 79
 - overview, 78
 - privacy and, 82–83
 - processing and analysis, 49, 52–53, 79
 - recording and storage, 79
 - use, 79
 - Data Directive (European Union), 52

- data divide, 84
 - data ethics
 - activities involving data
 - archiving, 79
 - destruction, 79
 - dissemination, 49, 53, 79
 - generation, 50–52, 79
 - overview, 78
 - privacy and, 82–83
 - processing and analysis, 49, 52–53, 79
 - recording and storage, 79
 - use, 79
 - big data
 - accountability and redress, 85
 - changes resulting from, 79–80
 - complexity as dimension of, 78
 - defined, 77–78
 - dimensions of, 77–78
 - overview, 77
 - uses of, 78
 - value as dimension of, 78
 - variability as dimension of, 78
 - variety as dimension of, 77
 - velocity as dimension of, 78
 - veracity as dimension of, 78
 - volume as dimension of, 77
 - case studies, 86–87
 - defining data, 77
 - historical background, 80–81
 - major thinkers in, 81–82
 - ongoing concerns
 - accountability and redress, 85
 - algorithmic power and bias, 85–86
 - data divide, 84
 - data sharing in academic research, 83–84
 - privacy, 82–83
 - data mining, 79
 - data sharing in academic research, 83–84
 - The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences* (Kitchin), 132
 - dataveillance, 50
 - Davis, C., 131
 - decisional interference as violation of privacy, 49
 - Declaration of Helsinki, 80
 - Declaration of Independence of the United States, 18
 - Defend Trade Secrets Act of 2016 (United States), 74
 - del.icio.us, 53
 - deontology
 - application of, 5
 - categorical imperative, 5
 - character ethics compared, 10
 - data privacy and, 83
 - data sharing in academic research and, 83
 - ethical dilemmas, 5
 - limitations of, 5–6
 - major thinkers in, 6
 - maxims, 4–6
 - moral disasters, 6
 - overview, 4–5
 - descriptive conception of privacy, 48
 - design patents, 72
 - destruction of data, 79
 - Dewey, Melvil, 7
 - diatopical hermeneutics, 104
 - Diderot, Denis, 38
 - Digital Advertising Alliance, 53
 - digital citizenship defined, 2, 116
 - digital divide, 37, 41, 118
 - digital inclusion, 41
 - digital invasion of privacy, 49, 53–54
 - Digital Millennium Copyright Act of 1998 (United States), 68, 70
 - dilution, trademark, 74
 - disclosure as violation of privacy, 49, 53
 - discourse ethics, 60–63
 - “Disguised Face Identification (DFI) with Facial KeyPoints Using Spatial Fusion Convolutional Network” (Singh, Patil, Reddy, and Omkar), 129
 - disinformation, misinformation, and fake news, 130–131
 - dissemination of data, 49, 53, 79
 - distortion as violation of privacy, 49
 - distributed moral responsibility and big data, 85
 - DIY Citizenship: Critical Making and Social Media* (Ratto and Boler), 132
 - drowning child (ethical thought experiment), 9
- E**
- ecology of knowledges, 104
 - Economic Espionage Act of 1996 (United States), 74
 - egoism, 11
 - Electronic Communications Privacy Act (United States), 51
 - emerging issues
 - information and technology at social margins and intersections
 - algorithmic bias, 127–128
 - ethics of social media and social movement, 128–129

- misinformation, disinformation, and fake news, 130–131
- open data, data return, and open data ethics, 131–132
- overview, 127
- precision marketing and social responsibility, 129–130
- technological unemployment, 130
- managing expanding capacities
 - bots and AI decision-making, 133–134
 - health data ownership, 134
 - overview, 132
 - predictive analytics, 133
 - 3-D printing and regulated items, 132–133
- Emerging Technology from the arXiv, 131
- Encyclopédie* (Diderot), 38
- An Enquiry into Human Understanding* (Hume), 2
- epistemicide, 105
- Ethical Challenges in Librarianship* (Hauptman), 31
- ethical dilemmas, 5
- ethical frameworks
 - character ethics
 - application of, 10
 - consequentialism compared, 10
 - deontology compared, 10
 - egoism, 11
 - ethics of care, 11
 - eudaimonic ethics, 9, 10
 - flourishing, 9, 10, 11
 - golden mean, 9–10
 - limitations of, 10–11
 - major thinkers in, 11
 - overview, 9–10
 - prudence, 9–10
 - transgressions, 10
 - virtue ethics, 9–11
 - consequentialism
 - act consequentialism, 7
 - application of, 7–8
 - casuistry, 7
 - consequentialist dilemmas, 7
 - hedonism, 7
 - intrinsic good, 7, 8
 - library faith, 7–8
 - limitations of, 8
 - major thinkers in, 8–9
 - moral catastrophes, 7
 - negative responsibilities, 9
 - overview, 6–7
 - transplant problem (ethical thought experiment), 8
 - utility, 7
- contractual ethics
 - application of, 12–13
 - contractarianism, 12
 - contractualism, 12
 - initial bargaining position, 14
 - justice as fairness, 12, 14
 - limitations of, 13
 - major thinkers in, 13–14
 - overview, 12
 - rational self-interest, 12, 13
 - social contracts, 12
 - standard indictment, 13
- deontology
 - application of, 5
 - categorical imperative, 5
 - ethical dilemmas, 5
 - limitations of, 5–6
 - major thinkers in, 6
 - maxims, 4–6
 - moral disasters, 6
 - overview, 4–5
 - overview, 4, 14
 - use of, 14
- “Ethical Issues in Cyborg Technology: Diversity and Inclusion” (Park), 134
- ethical theories of information access, 38–39
- Ethically Aligned Design* (IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems), 28
- ethics
 - defined, 1–2
 - morals compared, 1–2
 - Ethics and Librarianship* (Hauptman), 40
 - “Ethics of Big Data: Current and Foreseeable Issues in Biomedical Contexts” (Mittelstadt and Floridi), 132
 - ethics of care, 11
 - ethics of discourse
 - case studies, 63–65
 - conversational analysis ethics, 58–60
 - discourse ethics, 60–63
 - lifeworld, 63
 - overview, 57–58
 - reference interview and, 58, 63–64
 - signs, 59–60
 - ethics of social media and social movement, 128–129
 - eudaimonic ethics, 9, 10
 - European Parliament, 54

European Union's Data Directive, 52
 exclusion as violation of privacy, 49
 exclusive rights in Copyright Act of 1976, 71
 exposure as violation of privacy, 49, 53

F

Facebook, 50, 51, 52, 53–54, 119, 129, 131
 “Facebook Lets Advertisers Exclude Users by Race”
 (Angwin and Parris), 129
 Facebook Live, 128
 “Facebook Told Advertisers It Can Identify Teens
 Feeling ‘Insecure’ and ‘Worthless’”
 (Levin), 130
 “Facebook’s Ad Scandal Isn’t a ‘Fail,’ It’s a Feature”
 (Tufekci), 131
 facial recognition software, 128
 fair use, 75
 fair use exceptions to exclusive rights in Copyright
 Act of 1976, 71
 Fairchild, Amanda J., 133
 Fairclough, Norman, 58
 Fairey, Shepard, 74–75
 fake news, 41, 111, 130–131
 Falk, Richard, 116
 Farmer, Dan, 94
 Federal Bureau of Investigation (FBI), 97, 98
 Felten, Edward W., 83
 Ferrara, E., 131
 “First Evidence That Social Bots Play a Major Role
 in Spreading Fake News” (Emerging
 Technology from the arXiv), 131
 Fischer, Rachel, 103
 Flammini, A., 131
 Flickr, 53
 Floridi, Luciano, 32, 81, 132
 flourishing, 9, 10, 11
 Foot, Philippa, 9, 11
 Foreign Intelligence Surveillance Act (United
 States), 51
 Foucault, Michel, 57, 60
 Four Freedoms, 18–19
 free rider, 75
 free software movement (FSM), 93–94
 Freedom to Read Statement (ALA), 28, 29
 Froehlich, Thomas, 26, 30, 31
 Fuchs, Christian, 129

G

Garcia, Mannie, 75
 Gasser, Urs, 118, 119

Gauthier, David, 14
 Gavison, Ruth, 48
 generation of data, 50–52, 79
 Geofeedia, 119
 Gibson, Amelia, 127
 Glassman, Michael, 116
 global citizenship defined, 116
 global digital citizenship
 atrocities, reporting human rights, 121–122
 case studies, 118–122
 citizenship defined, 115
 continuing issues and concerns, 118
 definition of, 116
 digital citizenship defined, 116
 digital divide and, 118
 government suppression of information,
 118–121
 human rights and, 117
 intellectual history, 117–118
 overview, 115–116
 press (media) freedom, 120–121
 social media, government surveillance of
 immigrants through, 119–120
 Global Initiative on Ethics of Autonomous and
 Intelligent Systems (IEEE), 28
 Global North, 104
 Global South, 104
 golden mean, 9–10
 Google, 51, 52, 53–54, 129, 131
 Gorham, Ursula, 17
 Görman, U., 129
 government information
 freedom of, 40
 suppression of, 118–121
 grassroots globalization, 105
 Gray, Freddie, 119
 Greenawalt, Kent, 38, 39, 40
 Grice, P., 58
Griswold v. Connecticut, 47
 Grumperz, John, 59
 Gunkel, David J., 134
 “Guns, Limbs, And Toys: What Future For 3D
 Printing?” (Thierer and Marcus), 133
 “Guns Want to Be Free: What Happens When 3D
 Printing and Crypto-Anarchy Collide?”
 (Kopfstein), 132
 #Guptaleaks, 111, 112

H

Habermas, Jürgen, 60–62, 63
 hacked data usage (case study), 86–87

- hackers
 - hacker ethic, 93–94
 - hiring formerly convicted hackers, 96
 - white hat hackers, 93
 - Hackers: Heroes of the Computer Revolution* (Levy), 94
 - “The Hacker Manifesto” (Blankenship), 94
 - hacking back, 96
 - harm principle and information access, 39
 - Harris, Michael, 13
 - Hauptman, Robert, 31, 39–40, 41
 - health data ownership, 134
 - health care use of big data, 78
 - hedonism, 7
 - Hedrick, Todd, 62–63
 - hegemonic globalization, 105
 - Henderson, Kathrine Andrews, 67
 - hermeneutics, 4
 - history of ethics in the information professions
 - continuing issues and concerns, 33
 - information as subject of a domain, 31
 - major thinkers, 31–33
 - overview, 25
 - precursors to information ethics
 - computer ethics, 27–28
 - journalism and media ethics, 27
 - library and information science ethics, 28–30
 - overview, 26–27
 - Hjørland, Birger, 31
 - Hobbes, Thomas, 12, 13
 - Homeless Hotspots project, 22
 - homeless persons, human rights and, 22
 - Hongladarom, Soraj, 110
 - Hoppers, Catherine A. Odora, 105, 108, 110
 - “How Should Health Data Be Used?” (Kaplan), 134
 - Hsu, Jeremy, 130
 - Huey, Joanna, 83
 - human rights
 - atrocities, reporting, 121–122
 - case studies on, 22
 - Constitution of the United States and, 18
 - continuing issues and concerns, 19–22
 - Declaration of Independence of the United States and, 18
 - defined, 17
 - Four Freedoms, 18–19
 - generations of, 117
 - global digital citizenship and, 117
 - homeless persons and, 22
 - information, intersection with, 17–18
 - information ethics, intersection with, 21–22, 29
 - information literacy as human right, 21
 - intellectual history, 18–19
 - International Bill of Human Rights, 19
 - International Covenant on Civil and Political Rights, 19
 - International Covenant on Economic, Social, and Cultural Rights, 19
 - international human rights, 18–19
 - Magna Carta and, 18
 - major thinkers in, 18–19
 - overview, 17–18
 - prisoners and, 22
 - Universal Declaration of Human Rights (UDHR), 19, 20–21, 29, 39, 117
 - Universal Declaration of Human Rights (UDHR) [excerpts], 44–45
 - “Human Rights vs. Robot Rights: Forecasts from Japan” (Robertson), 134
 - human subject research and experimentation, 80–81
 - Hume, David, 2
 - Hursthouse, Rosalind, 11
 - Husserl, Edmund, 63
- I**
- ICOM Code of Ethics, 30
 - ICT. *See* information and communication technologies (ICTs)
 - identification as violation of privacy, 49
 - IEEE Code of Ethics, 27–28
 - IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, 28
 - IFLA Code of Ethics for Librarians and Other Information Workers, 29
 - IFLA (International Federation of Library Associations and Institutions), 20, 29
 - “In Search of a Silver Bullet: Child Welfare’s Embrace of Predictive Analytics” (Church and Fairchild), 133
 - increased accessibility as violation of privacy, 49
 - indigenous knowledge, 105
 - information access
 - access to information, 40
 - case studies, 41–42
 - consequentialism and, 38–39
 - continuing issues and concerns, 40–41
 - digital divide, 37
 - dimensions of access, 37
 - ethical theories of, 38–39
 - harm principle and, 39
 - information literacy, 41

- information access (*cont.*)
 - intellectual freedom
 - defined, 40
 - digital inclusion, 41
 - overview, 40–41
 - intellectual history
 - overview, 38
 - post-Enlightenment and truth, rights, and justice, 38–39
 - pre-Renaissance and the Enlightenment and controlling knowledge, 38
 - major thinkers on, 39–40
 - overview, 37
 - primary source materials on, 42–45
- information and communication technologies (ICTs)
 - digital divide, 37, 41
 - digital inclusion, 41
 - human rights and, 20–21
 - information access and, 39, 40
 - information ethics and, 3
 - intercultural information ethics and, 106, 111–112
 - managing expanding capacities
 - bots and AI decision-making, 133–134
 - health data ownership, 134
 - overview, 132
 - predictive analytics, 133
 - 3-D printing and regulated items, 132–133
 - neutrality and, 109
 - privacy and
 - information collection, 49, 50–52
 - information dissemination, 49, 53
 - information processing, 49, 52–53
 - invasion, 49, 53–54
 - overview, 49–50
- information and technology at social margins and intersections
 - algorithmic bias, 127–128
 - ethics of social media and social movement, 128–129
 - misinformation, disinformation, and fake news, 130–131
 - open data, data return, and open data ethics, 131–132
 - overview, 127
 - precision marketing and social responsibility, 129–130
 - technological unemployment, 130
- information as subject of a domain, 31
- information ethics
 - domain of, boundary-setting challenges in establishing, 3
 - historical precursors to. *See* history of ethics in the information professions
 - human rights, intersection with, 21–22
 - intellectual history, 4–11
 - overview, 3–4
 - “Information Ethics” (Smith), 25
 - Information Ethics Special Interest Group - Association for Library and Information Science Education, ix
 - information intersecting with human rights, 17–18
 - information literacy, 21, 41
 - information poverty, 106–107
 - information poverty theory, 40
 - informed consent and data privacy, 83
 - infringement, trademark, 73
 - initial bargaining position, 14
 - insecurity as violation of privacy, 49
 - Instagram, 119
 - Institute of Electrical and Electronics Engineers (IEEE), 27–28, 95
 - intellectual freedom
 - defined, 40
 - digital inclusion, 41
 - overview, 40–41
 - intellectual history
 - of cognitive justice and intercultural information ethics, 106–107
 - of cybersecurity ethics, 93–96
 - of ethical frameworks
 - character ethics, 9–11
 - consequentialism, 6–9
 - contractual ethics, 12–14
 - deontology, 4–6
 - overview, 4, 14
 - use of, 14
 - of global digital citizenship, 117–118
 - of human rights, 18–19
 - of information access
 - overview, 38
 - post-Enlightenment and truth, rights, and justice, 38–39
 - pre-Renaissance and the Enlightenment and controlling knowledge, 38
 - of information ethics, 4–11
 - overview, 4
 - of privacy, 47–49
 - intellectual property, 68–69
 - intellectual property ethics
 - authorship in Copyright Act of 1976, 71
 - case study, 74–75
 - copyright, 67, 68
 - exclusive rights in Copyright Act of 1976, 71

- fair use exceptions to exclusive rights in
 - Copyright Act of 1976, 71
 - glossary, 75
 - historical background and law
 - Copyright Act of 1790 (United States), 70
 - Copyright Act of 1976 (United States), 70–71
 - Defend Trade Secrets Act of 2016 (United States), 74
 - Lanham Act of 1946 (United States), 73–74
 - overview, 69–70
 - Patent Act of 1790 (United States), 71–72
 - Patent Act of 1793 (United States), 72
 - justice as fairness theory and, 68
 - natural right of private property and, 67–68
 - overview, 67–68
 - patents, 67, 68, 71–73
 - trade secrets, 67, 74
 - trademarks, 67, 73–74
 - intercultural information ethics and cognitive
 - justice. *See* cognitive justice and intercultural information ethics
 - intercultural information ethics (IIE) defined, 106
 - International Bill of Human Rights, 19
 - International Center for Information Ethics, 32
 - International Council of Electronic Commerce
 - Consultants (EC-Council), 95
 - International Council of Museums (ICOM), 30
 - International Covenant on Civil and Political Rights, 19
 - International Covenant on Economic, Social, and Cultural Rights, 19
 - international digital divide, 37
 - International Federation of Library Associations and Institutions (IFLA), 20, 29
 - international human rights, 18–19
 - International Review of Information Ethics*, 32
 - internet access, universal, 20–21
 - Internet Society, 20
 - interrogation as violation of privacy, 49
 - intrinsic good, 7, 8
 - Introna, Lucas, 81
 - intrusion as violation of privacy, 49
 - invasion of privacy, 49, 53–54
- J**
- Jaeger, Paul T., 17, 117
 - James I, King of England, 38
 - Jefferson, Thomas, 69
 - Johnson, Deborah G., 96
 - Journal of Information Ethics*, 31, 40, 115
 - journalism and media ethics, 27
 - justice and human subject research and experimentation, 81
 - justice as fairness theory, 12, 14, 68
- K**
- Kamm, Frances, 6
 - Kant, Immanuel, 4, 5, 6
 - Kaplan, B., 134
 - Katz, Jacob, 81
 - Katz v. United States*, 51
 - Kelmor, Kimberli M., 117
 - Kitchin, Rob, 132
 - Klazar, Erin, 103
 - Knox, Emily J. M., 37
 - Kopfstein, Janus, 132
 - Kuhn, Thomas, 2
- L**
- Lanham Act of 1946 (United States), 73–74
 - Large Synoptic Survey Telescope (LSST) and access to scientific data (case study), 86
 - law and historical background for intellectual property ethics
 - Copyright Act of 1790 (United States), 70
 - Copyright Act of 1976 (United States), 70–71
 - Defend Trade Secrets Act of 2016 (United States), 74
 - Lanham Act of 1946 (United States), 73–74
 - overview, 69–70
 - Patent Act of 1790 (United States), 71–72
 - Patent Act of 1793 (United States), 72
 - “Legal and Ethical Concerns of Big Data: Predictive Analytics” (Paulson and Scruth), 133
 - “The Legal and Ethical Concerns That Arise from Using Complex Predictive Analytics in Health Care” (Cohen, Amarasingham, Shah, Xie, and Lo), 133
 - Lehr, David, 134
 - Leviathan* (Hobbes), 12, 13
 - Levin, Sam, 130
 - Levy, Steven, 94
 - library and information science ethics, 28–30
 - Library Bill of Rights (ALA), 28–29
 - library faith, 7–8
 - lifeworld, 63
 - Lincoln, Abraham, 68, 71
 - LinkedIn, 50, 53
 - Lipset, Seymour Martin, 115
 - Lo, Bernard, 133

Locke, John, 6, 18, 67
 Louden, Robert, 11
 Lynch, Michael, 61
 Lyons Declaration on Access to Information and
 Development, 21

M

“Machine Bias: Investigating Algorithmic
 Injustice” (ProPublica), 128
*The Machine Question: Critical Perspectives on AI,
 Robots, and Ethics* (Gunkel), 134
 MacIntyre, Alasdair, 11, 57
 Magna Carta (United Kingdom), 18
 major thinkers
 in character ethics, 11
 in cognitive justice and intercultural
 information ethics, 107–109
 in consequentialism, 8–9
 in contractual ethics, 13–14
 in cybersecurity ethics, 93–96
 in data ethics, 81–82
 in deontology, 6
 in history of ethics in the information
 professions, 31–33
 in human rights, 18–19
 in information access, 39–40
 “‘Making A Killing’: On Race, Ritual, and (Re)
 Membering in Digital Culture”
 (Sutherland), 134
 Maner, Walter, 95
 Marcus, A., 133
 marks, 67, 73–74
 Mathiesen, Kay, 37, 39
 maxims, 4–6
 McNealy, Scott, 50
 media freedom and global digital citizenship, 120–121
 medical research, data divide and, 84
 Menczer, F., 131
 Mikk, Katherine A., 134
 Mill, John Stuart, 7, 9, 38–39, 41, 42
 misinformation, disinformation, and fake news,
 130–131
 Mittelstadt, B. D., 132
 “Modern Moral Philosophy” (Anscombe), 11
 Moon, Donald, 62
 Moor, James H., 95–96
 moral disasters, 6
 moral philosophy, 2–3
 morals
 defined, 1–2
 ethics compared, 1–2

Morris, Robert, 97–98
 Morris worm (case study), 97–98
 “Moscow Officially Turns on Facial Recognition
 for Its City-Wide Camera Network”
 (Coldewey), 129

N

Nagel, Thomas, 6
 Narayanan, Arvind, 83
 National Security Agency, 98
 NATO Tallinn Manual, 97
 natural right, 75
 natural right of private property and intellectual
 property ethics, 67–68
 negative responsibilities, 9
 Netflix, 50
 neutrality and IFLA Code of Ethics for Librarians
 and Other Information Workers, 29
 Noble, Safiya Umoja, 128
 Nordgren, A., 129
 Nordström, K., 129
 normative conception of privacy, 48
 Norris, Pippa, 118
 Norwegian Data Inspectorate, 51
 Nuremberg Code, 80

O

Obama, Barack, 74–75
 Obama HOPE poster and fair use (case study),
 74–75
 “OkCupid Study Reveals the Perils of Big-Data
 Science” (Zimmer), 132
 oligarchies and cognitive and social justice, 110–112
 Omkar, S. N., 129
 “On Liberty” (Mill), 38–39, 41
 “On Liberty” (Mill) [excerpts], 42–44
 O’Neil, Cathy, 128
 online behavioral targeting, 52–53
 open data, data return, and open data ethics,
 131–132
 Open Web Application Security Project, 95
 original position, 12–13
 Oxford Internet Institute’s Digital Ethics Lab, 32

P

Palfrey, John, 118, 119
 Palmer, Imani, 91
 Parekh, Bhikhu, 117
 Park, Enno, 134

- Parris, T., 129
- Patent Act of 1790 (United States), 71–72
- Patent Act of 1793 (United States), 72
- Patent and Copyright Clause of the United States Constitution, 70
- patents, 67, 68, 71–73
- “The Pathway to Patient Data Ownership and Better Health” (Mikk, Sleeper, and Topol), 134
- Patil, D., 129
- Patreon, 86
- Paulson, Shirley S., 133
- Peled, Roy, 117
- Penetration Testing Execution Standard, 95
- Periscope (Live video streaming service), 128
- Perrudin, M., 129
- philosophical inquiry related to computer and information ethics, 95–96
- philosophy of information (PI), 3
- Phrack* (Magazine), 94
- plant patents, 72
- political use of big data, 78
- post-Enlightenment and truth, rights, and justice, 38–39
- pre-Renaissance and the Enlightenment and controlling knowledge, 38
- precision marketing and social responsibility, 129–130
- precursors to information ethics
 - computer ethics, 27–28
 - journalism and media ethics, 27
 - library and information science ethics, 28–30
 - overview, 26–27
- predictive analytics, 133
- press (media) freedom and global digital citizenship, 120–121
- Price, Derek J. de Solla, 31
- primary data, 79
- primary source materials and privacy, 54–55
- Principle of Permissible Harm* (Kamm), 6
- prisoners and human rights, 22
- Prisoners’ Right to Read (ALA), 22
- privacy
 - conceptualizations of, 47–48
 - continuing issues and concerns, 49–54
 - data ethics and, 82–83
 - definitions of, 47–48
 - descriptive conception of, 48
 - digital invasion of, 49, 53–54
 - dimensions of, 47–48
 - information and communication technologies (ICTs) and
 - information collection, 49, 50–52
 - information dissemination, 49, 53
 - information processing, 49, 52–53
 - invasion, 49, 53–54
 - overview, 49–50
 - intellectual history, 47–49
 - normative conception of, 48
 - overview, 47
 - primary source materials, 54–55
 - Solove’s taxonomy of privacy violations, 48–54
 - US laws on, 47
 - violations of, 48–49
- Privacy Act of 1974 (United States), 119
- processing and analysis of data, 49, 52–53, 79
- Progressive Librarians Guild (PLG), 20
- ProPublica, 128
- Prosser, William L., 50
- Protecting Consumer Privacy in an Era of Rapid Change: Recommendations for Businesses and Policymakers* (US Federal Trade Commission), 52–53
- prudence, 9–10
- R**
- Raber, D., 58
- Rabin, Yoram, 117
- Radford, Gary, 63
- Rank, Allison, 118
- ransomware, 96–97
- Rappaport, Elizabeth, 39
- rational self-interest, 12, 13
- Ratto, Matt, 132
- Rawls, John, 12, 13, 14, 68, 106
- Raymond, Eric S., 94
- recording and storage of data, 79
- Reddy, G. M., 129
- reference interview and ethics of discourse, 58, 63–64
- “Regulating by Robot: Administrative Decision Making in the Machine Learning Era” (Coglianese and Lehr), 134
- relativism *versus* universalism, 110
- Republic of South Africa, Constitution of, 111
- reputational harm and hacked data usage (case study), 87
- respect for persons and human subject research and experimentation, 80–81
- “The Right to Privacy” (Warren and Brandeis), 47, 54–55
- “Rise of the Ag-Bots Will Not Sow Seeds of Unemployment” (Hsu), 130

“The Rise of Social Bots” (Ferrara, Varol, Davis, Menczer, and Flammini), 131
 Robertson, Jennifer, 134
Roe v. Wade, 47
 Ronteltap, A., 129
 Roosevelt, Franklin Delano, 18–19
 Rousseau, Jean-Jacques, 12, 13

S

SAA Code of Ethics, 29–30
 SAA Core Values of Archivists, 29–30
 Samek, Toni, 41, 115
 San Bernardino shooter’s iPhone (case study), 98
 Sandvig, Christian, 86
 Santos, Boaventura de Sousa, 104, 107–108
 Saussure, Ferdinand de, 59
 Savigny, J., 129
 Scanlon, T. M., 12, 14
 Schattle, Hans, 116
 Scheffler, Samuel, 59
 Schiffrin, Deborah, 58
 scientific data access (case study), 86
 Scruth, Elizabeth, 133
 search engines and big data, 78
 Searle, John, 59
 Searson, Michael, 116
 secondary data, 79
 secondary use of information as violation of privacy, 49
 Segran, Elizabeth, 130
 semiotic democracy, 119
 Shah, Anand, 133
 Shannon, Claude, 3
 Shultz, Lynette, 115
 Sidgwick, Henry, 7
 signs and ethics of discourse, 59–60
 Singer, Peter, 9
 Singh, A., 129
 “Singling out People without Knowing Their Names—Behavioural Targeting, Pseudonymous Data, and the New Data Protection Regulation” (Borgesius), 130
 Sleeper, Harry A., 134
 Smith, Brad, 97
 Smith, Linda Tuhiwai, 109
 Smith, Martha M., 25, 31, 32–33
 Snowden, Edward, 40, 54
 social contracts, 12
 social justice, 106–107, 109

social margins and intersections, information and technology at. *See* information and technology at social margins and intersections

social media. *See also specific social media*
 big data, use of, 78
 ethics of social media and social movement, 128–129
 government surveillance of immigrants through, 119–120

Social Media: A Critical Introduction (Fuchs), 129
 Society of American Archivists (SAA), 29–30
 Solove, Daniel, 48
 Solove’s taxonomy of privacy violations, 48–54
 South Africa, Constitution of, 111
 South African state capture (case study), 110–112
 specialists in ethics. *See* major thinkers
 Stallman, Richard, 93
 standard indictment, 13
 state capture (case study), 110–112
 Statute of Anne (Great Britain), 69, 70
 Stille, Alexander, 41
 “Stop Expecting Facebook and Google to Curb Misinformation—It’s Great for Business” (Biddle), 131
 storage and recording of data, 79
 StreetBump, 84
The Structure of Scientific Revolutions (Kuhn), 2
 Sturges, Paul, 27
 surveillance as violation of privacy, 49, 50–51, 53–54, 78, 119–120
 surveillance capitalism, 129
 Sutherland, Tonia, 134

T

Tallinn Manual, 97
 tarnishment of trademarks, 74
 Tavani, Herman, 48
 Taylor, Harriet, 39
 Taylor, Natalie Greene, 17
 technological unemployment, 130
 “Technological Unemployment. A Brief History of an Idea” (Camps), 130
 themes in information ethics literature
 access. *See also* information access
 journalism and media ethics, 27
 library and information science ethics, 28–29
 overview, 25
 community
 computer ethics, 28

- journalism and media ethics, 27
 - library and information science ethics, 29–30
 - overview, 26
 - overview, 25–26
 - ownership
 - journalism and media ethics, 27
 - overview, 26
 - privacy and confidentiality. *See also* privacy
 - computer ethics, 28
 - journalism and media ethics, 27
 - library and information science ethics, 28, 30
 - overview, 26
 - security
 - computer ethics, 28
 - journalism and media ethics, 27
 - overview, 26
 - A Theory of Justice* (Rawls), 106
 - Thierer, A., 133
 - 3-D printing and regulated items, 132–133
 - Tocqueville, Alexis de, 39
 - Topol, Eric J., 134
 - trade and service marks, 67, 73–74
 - trade secrets, 67, 74
 - Trademark Act of 1946 (United States), 73–74
 - trademarks, 67, 73–74
 - transactional language, 58–60
 - transgressions, 10
 - transplant problem (ethical thought experiment), 8
 - truth-discovery justification, 39
 - Tufekci, Zeynep, 128, 129, 131
 - Tumblr, 50
 - Turkish government, protesters, and global digital citizenship, 118–119
 - Tuskegee Syphilis Study, 80, 81
 - Twitter, 50, 78, 119, 121–122
 - Twitter and Tear Gas: The Power and Fragility of Networked Protest* (Tufekci), 129
 - “Two Ex-Googlers Want to Make Bodegas and Mom-and-Pop Corner Stores Obsolete” (Segran), 130
- U**
- unemployment, technology-fueled, 130
 - United Nations and international human rights, 19–21
 - United Nations Education, Scientific and Cultural Organization (UNESCO), 20, 37
 - United States Congress, 54
 - United States Constitution, 18, 67, 70
 - United States Department of Health, Education and Welfare, 80
 - United States Department of Homeland Security, 119–120
 - United States Federal Trade Commission, 52
 - United States National Security Agency, 40, 54
 - United States Supreme Court, 47
 - United States Trademark and Patent Office, 73
 - Universal Declaration of Human Rights (UDHR), 19, 20–21, 29, 39, 117
 - Universal Declaration of Human Rights (UDHR) [excerpts], 44–45
 - universalism *versus* relativism, 110
 - USA PATRIOT Act, 51
 - utilitarians, 7
 - utility, 7
 - utility patents, 72
- V**
- value as dimension of big data, 78
 - Van Niekerk, Johan, 92
 - van Trijp, H., 129
 - variability as dimension of big data, 78
 - variety as dimension of big data, 77
 - Varol, O., 131
 - veil of ignorance, 12
 - Velden, Maja van der, 109
 - velocity as dimension of big data, 78
 - Venema, Wietse, 94
 - veracity as dimension of big data, 78
 - vices, 9, 10
 - A Vindication of the Rights of Man* (Wollstonecraft), 18
 - violations of privacy, 48–49
 - virtue ethics, 9–11
 - virtues, 9
 - Visvanathan, Shiv, 103, 107, 109
 - volume as dimension of big data, 77
 - Von Solms, Rossouw, 92
- W**
- Walters, Gregory J., 117
 - Ward, Stephen, 27
 - Warren, S., 47, 49, 50, 54
 - Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (O’Neil), 129
 - Web 2.0 and information dissemination, 53
 - Weiner, Norbert, 31
 - Wellman, Barry, 116, 118

Wells, Chris, 118
Westin, Alan F., 47
“What is Computer Ethics?” (Moor), 96
WhatsApp, 119
white hat hackers, 93
Wiener, Norbert, 95
Williams, Bernard, 9
Williams, James, 59–60
Wollstonecraft, Mary, 18
Woodiwiss, Anthony, 17
Wooffitt, Robin, 59
World Bank, 111
World Press Freedom Index, 121

X

Xie, Bin, 133

Y

Yahoo, 53
YouTube, 119
Yule, George, 58

Z

Zimmer, Michael, 47, 132
Zimmerman, Margaret, 115