

THE ETHICS OF INFORMATION

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Declaration*

Introduction

The Italian philosopher Luciano Floridi, regarded as the founder of the fields of philosophy of information and digital ethics, is a pioneering thinker who has redefined the relationship between technology, artificial intelligence and ethics throughout his academic career. After completing his education at La Sapienza University in Rome and the University of Warwick, he spent many years at the University of Oxford, where he founded the Digital Ethics Laboratory. He currently continues his work as director of the Digital Ethics Centre (DEC), which he established at Yale University, and as a professor at the University of Bologna. Floridi not only develops philosophical theories but also advises institutions such as the European Union on technology policy; in 2022, he was honoured with Italy's highest state honour in recognition of his immense contributions to the literature and to global AI ethics.

Human history has undergone—and continues to undergo—profound shifts in mindset driven by scientific and technological revolutions. Nicolaus Copernicus ushered in a cosmological shift by removing humanity from the center of the universe; Charles Darwin established an evolutionary continuum by dethroning humanity from the pinnacle of the biological kingdom; and Sigmund Freud sparked a psychoanalytic revolution by shaking the belief in the transparency of the purely rational mind. In his work *The Ethics of Information* (2013), Luciano Floridi characterizes the revolution in information and communication technologies (ICT)—pioneered by Alan Turing—as the Fourth Revolution, one that redefines humanity's place in the universe and its very nature. The transformative effects of Information and Communication Technologies (ICT) on the human condition, social structure, and perception of reality constitute one of the most fundamental philosophical issues of the twenty-first

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century. Luciano Floridi's work *The Ethics of Information* offers a comprehensive, systematic, and innovative macroethical framework to address the ethical challenges posed by this technological and ontological transformation. As the second volume of the four-volume *Principia Philosophiae Informationis* series—which lays the foundations of the philosophy of information—the work begins with the thesis that classical anthropocentric (human-centered) or biocentric (life-centered) ethical theories fall short in resolving the complex problems of the information age.

Floridi argues that humanity is currently in a hyperhistorical phase. In this phase, social well-being and development are directly dependent on the successful management of information cycles. In this era, in which technology is restructuring the world not only epistemologically but also ontologically (re-ontologization), Floridi develops an “e-nvironmental” approach, arguing that all information entities possess an intrinsic moral value. In assessing the historical process, the author notes that we have moved beyond the historical era that began with the recording and transmission of information; in this period, referred to as the zettabyte era, people now experience an “onlife” (online life) in which digital and analog boundaries have dissolved. This study examines Floridi's work by first providing a detailed summary of all sixteen chapters, followed by a thorough book review of the work's philosophical architecture.

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This work aims to achieve certain objectives in order to systematize the conceptual foundations of information ethics. The meta-theoretical objective defines the nature, methods, and issues of information ethics, while the introductory objective helps the reader understand concepts related to computer ethics. The analytical objective, meanwhile, focuses on addressing theoretical questions regarding the philosophical and ethical implications of information and communication technologies. To achieve these objectives, the work presents a broad scope of analysis, ranging from the philosophy of being to complex global ethical issues.

Abstract

If a classification is to be made, the first five chapters of the book begin by laying an ontological foundation for the problem of situating ethics in the wake of the information revolution. The book features a first chapter that examines the information revolution—the fourth revolution in humanity's understanding of its own nature, following the Copernican, Darwinian, and Freudian revolutions—which emerged with Alan Turing. The author argues



that humans are not beings who stand motionless at the center of the universe (pre-Copernican), are completely detached from other living beings (pre-Darwinian), or are transparent, purely rational entities (pre-Freudian). On the contrary, he contends that they have become interconnected “inforgs” within a global information ecosystem called the “Infosphere.” By ontologically restructuring our environment and erasing the boundary between the digital and analog worlds, ICTs create a hyper-historical state of existence. In the zettabyte age—reached as a result of the accumulation of information—concepts such as ownership, virtual entities, and autonomous systems have emerged.

In the second chapter, the author examines the development of the concept of Information Ethics within the framework of the Source, Product, Target, and Macroethics model. This evolution, illustrated through the example of Alice—an ethical failure—demonstrates how the nature of information is perceived. Arguing that the first three stages (Source, Product, and Target) are reductionist, the author positions Information Ethics in the fourth stage as a holistic macroethical theory in its own right. This transformation requires accepting information as an ontological entity.

To deepen his philosophical analysis, Floridi introduces the concept of Levels of Abstraction (LoA) in the third chapter, borrowing it from the formal methods of computer science. The analysis of a system and the properties attributed to it are directly dependent on the set of observable variables selected—that is, the LoA. Floridi uses this method to redefine the concept of telepresence. He rejects the standard model, which defines telepresence as an epistemic failure—the inability to distinguish between the real and the virtual. Instead, he defines telepresence as the successful observation of an entity in a distant field of view at a specific LoA. Furthermore, by distinguishing between forward and backward telepresence based on the direction of the action, it enables a clearer understanding of privacy issues in situations such as the use of CCTV cameras.

In the fourth chapter, Floridi establishes Information Ethics as an ontocentric (entity-centered) and patient-oriented (focused on those affected by actions rather than the agent) macroethical theory that views all entities as information systems. He explains the homogeneity of entities by referring to the state of Nothingness or the corruption of being as metaphysical entropy. By extending his ecological approach to the information universe, he introduces the principle of ontological equality, which states that every entity deserves respect, even at the most minimal level. Finally, by evaluating the relationships between information ethics and virtue ethics,



deontology, and consequentialism, issues such as vandalism, bioengineering, and death are examined through an e-environmental analysis.

In the fifth chapter, the author addresses the ongoing foundationalist debates regarding the academic status of Computer Ethics. While some approaches view Computer Ethics as a temporary pedagogical method or an adaptation of existing philosophical theories to new problems (applied ethics), Floridi adopts a radical approach. He argues that the problems created by ICTs are unique; therefore, there is a need for a new philosophical discipline with ontological foundations—namely, Information Ethics as a branch of macroethics.

In the sixth chapter of the book, Floridi harshly criticizes Kantian axiology, which confines ethical debates to human reason. He emphasizes that approaches which accept rationality as the sole criterion of moral respect are insufficient for grasping the wholeness of the Infosphere and that well-being. The fundamental axiom of the Ethics of Information is as follows: Everything that exists—whether natural or artificial—possesses a minimum intrinsic moral value and holds the right to development simply by virtue of being an object of knowledge. This ontocentric approach expands the horizons of environmental ethics beyond biological life to include inanimate digital entities as well.

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The class of moral agents is expanded beyond its traditional boundaries to include autonomous artificial intelligence systems (Artificial Agents—AA) that lack consciousness or free will. Floridi and Sanders state that for an entity to be considered an agent, it must meet three criteria at a specific Level of Abstraction (LoA): interactivity, autonomy, and adaptability. Consciousness, mental states, or intent are not absolute prerequisites for moral agency. This non-mental conception of ethics acknowledges that artificial systems can be the source of actions that produce morally good or bad outcomes, while drawing a clear line between the concepts of intent-based responsibility and accountability based on causal impact.

If the world is an ontologically restructured Infosphere and we, too, are inforgs, what is humanity's moral role here? Finding the classical models of Homo Faber (Tool-Making Man) or Homo Oeconomicus (Economic Man) inadequate, Floridi argues that humans are creative agents who shape the world—that is, Homo Poieticus (Creator Man). While traditional virtue ethics focuses on the individual's construction of their own character, the information age necessitates the moral construction of the goals of our actions and our environment—that is, ecopoiesis. Movements such as the internet and open-source software serve as examples of



poietically empowering ecosystems and maximize humanity's potential as both an epistemic agent and a moral constructor.

Understanding the nature of evil lies at the heart of the ethics of knowledge. Floridi adopts an interpretation that does not define evil as a positive, essential entity. Just as in the Augustinian tradition, evil is the absence of good or the corruption of being; in a computational context, this corresponds to metaphysical entropy. The unjust destruction or corruption of knowledge structures, data, and relationships constitutes fundamental evil. This concept allows us to understand the phenomenon of artificial evil—harm caused to the environment by the interaction of machines without human intent, yet without a malevolent agent behind it.

The Information Age creates a paradoxical state of moral anguish. Thanks to global communication networks, people are constantly and instantly aware of evils, disasters, and injustices taking place all over the world. However, when this high flow of information is not supported by a commensurate capacity for intervention, good intentions—as a moral agent—experience a profound tragedy. Floridi explains this situation by drawing parallels to the character of Miranda in Shakespeare's "The Tempest", who helplessly watches a distant shipwreck, and to Cassandra of Troy, who knew of impending disasters but lacked the power to prevent them. While ICTs constantly confront us with evils we cannot resolve, creating a sense of moral exhaustion and helplessness, initiatives such as the Copenhagen Consensus are presented as strategies for coping with information through information itself. The author examines human identity and the self through a computational architecture. Drawing on Plato's metaphor of the charioteer, Floridi questions how the self holds together multiple layers and proposes the "Three Membranes" model.

Floridi offers a revolutionary approach to privacy debates. He notes that theories defending privacy through classical property rights or spatial boundary violations fail to resolve the problems created by data collected in public spaces (such as via CCTV cameras). Instead, he argues that a person's personal data is an ontological part of the individual and a building block of the information architecture. Consequently, a privacy violation is not theft or a boundary violation, but an attack on a person's ontological integrity—a form of bodily abduction or cloning. The frictionlessness of the infosphere leads to an uncontrolled flow of data, directly threatening the construction of identity.

In networked hyper-societies, moral actions increasingly transcend the boundaries of the individual agent. The concept of distributed ethics refers to the phenomenon where small



actions—each of which might be considered morally neutral or insignificant on its own—cumulatively combine through the network to produce massive macro-level consequences, whether good or bad. In this context, Floridi develops the concept of “infraethics.” Infraethics refers to mechanisms in society—such as trust, transparency, design, and communication infrastructure—that are morally neutral in and of themselves; these elements act as systemic catalysts that either facilitate or hinder the occurrence of distributed moral actions. Examples of this include online crowdfunding and algorithmic systemic biases.

Institutions and businesses are considered macro-actors within the Infosphere. Floridi presents the WHI (What, How, Impact) framework to facilitate the ethical analysis of institutional structures. A company’s products or services (What), the methods and processes used to produce them (How), and the ontological and ecological traces of these activities within the Infosphere (Impact) must be evaluated together. This intersection of business ethics and information ethics offers a new perspective on the distribution of responsibility within the multi-actor network structures of the modern information economy.

The globalizing, increasingly interconnected, and synchronized information society raises the issue of the universality of moral values. Floridi argues that simple communication ethics will prove insufficient in this complex structure and that a transition to a profound global information ethics is necessary. However, this does not imply the imposition of a hegemonic universality. To ensure that cultural differences are preserved to the greatest extent possible—unlike the necessary relationship between a lion and a gazelle—an ontological foundation of trust must be established in which agents voluntarily agree not to destroy one another.

In the book’s concluding chapter, Floridi tests his philosophical system by providing methodological responses to 20 fundamental criticisms directed at his theory over the past decade. Among these criticisms are claims that the Ethics of Knowledge is a naturalistic fallacy, that attributing value to all entities implies pantheism, that it confuses moral value with moral respect, and that it is inapplicable because it dehumanizes. The author demonstrates that the protection of entities in the Infosphere is not a mystical belief but a logical and ecological necessity, and that his macroethical system is resilient against such skeptical attacks.



Analysis

Luciano Floridi's "The Ethics of Information" is a monumental intellectual endeavor that pushes the boundaries by treating information not merely as a communication process, a data set, or semantic content, but as the fundamental ontological fabric of reality. The book does not merely offer a practical prescription for resolving current debates in Computer Ethics or Cyber Ethics (such as software ownership, artificial intelligence biases, or spam messages); rather, it constructs a macro-structure that reinterprets Kantian ethics, Spinozist philosophy, and Platonic epistemology in light of the information age.

The book's greatest philosophical strength lies in its innovative ontology of technology. While technology is often viewed as an artificial construct set in opposition to nature, Floridi dismantles this classic dichotomy by equating the status of information entities. New terms coined by the author—such as the Infosphere, Inforg, Metaphysical Entropy, Ontic Trust, and Homo Poieticus—are the product of an effort to construct not merely a descriptive but also a normative world.

In particular, the discussions on privacy in Chapter 12 make a significant contribution to the existing literature. By shifting the focus of privacy away from a property-based foundation and grounding it in the context of personhood, bodily integrity, and ontological identity, the book offers legal and policy makers a much stronger line of defense against big data collectors and technology companies in the public sphere. Similarly, the concept of distributed ethics is vital for understanding the moral accountability gaps caused by today's multi-actor, simultaneous, and algorithm-driven networks of action. The analysis of how structures that appear neutral can act as catalysts for major moral catastrophes or social good is one of the sharpest observations of the social media age.

While the work possesses strong internal consistency, the conceptual barrier for the reader is quite high. As Floridi himself states in the preface, this book is not a quick or easy read. For readers with a weak philosophical background, the adaptation of mathematical/computational terminology—such as Levels of Abstraction (LoA) and computational structural realism—to philosophy is challenging. Furthermore, the issue of practical applicability arises in Floridi's ontocentric approach. While arguing that every entity of knowledge—be it an algorithm, an inanimate stone, or a fictional text—possesses intrinsic value at a specific LoA may be theoretically comprehensive, in practice it complicates moral prioritization during moments of crisis marked by conflicting interests.



To help readers overcome this challenge, the author has sought to enhance the text's flow by adding summaries at the beginning of each chapter and conclusions at the end, aiming to bridge the traditional divide between analytics and philosophy.

This book serves as a foundational resource, particularly for philosophers, professionals in the field of information technology, students with a high level of academic knowledge and strong interest in the subject, and researchers interested in the social impacts of technology. It develops a philosophical approach not only to practical technological issues but also to the ethical challenges posed by the digital age. In addition, it offers theoretical responses to some of today's most debated topics (privacy and the accountability of artificial intelligence systems). Although the book is not written in an easy-to-read style or with straightforward content, it possesses the depth to be recommended to anyone curious about the fundamentals of computer technology, big data, and artificial intelligence—as well as the topic of information ethics—in our increasingly digital world.

In conclusion, Luciano Floridi's *The Ethics of Information* is a monumental conceptual framework designed to address the social, ethical, and existential issues shaped by technology in the twenty-first century. The text does not merely establish practical legal rules to manage the side effects of current technologies (such as data theft, artificial intelligence autonomy, and censorship); it defines the very knowledge of reality, its environmental protection, and its ethical construction as an ontological task.

By successfully synthesizing methodological abstractions derived from computer science (LoA) with the metaphysical depth of classical Western philosophy (Spinoza, Kant, Heidegger, Moore), Floridi provides a single, integrated perspective of the Ethics of Knowledge to address a wide range of issues, from cybersecurity to artificial intelligence, and from digital privacy to the climate crisis. Although his work faces harsh criticism in academic debates—such as accusations of excessive inclusivity, the elimination of anthropocentrism, or the fallacy of naturalism—it serves as a visionary guide for *Homo Poieticus* (the creative human) existing within a digital ecosystem. The survival of the infosphere, the protection of information entities from entropy, and the management of distributed ethics through appropriate infrastructures are presented as both a moral responsibility and an ontological destiny for humanity. Given that generative artificial intelligence, big data, and autonomous systems will become even more prevalent in daily life in the coming decades—as the “onlife” experience becomes the norm—the theoretical foundations laid by Floridi will continue to be



one of the indispensable mainstream paradigms not only of technology ethics but of general philosophical ethics as well.

References

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