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Ethical and Social Issues: A Literature Study on Management Problems in Information Technology

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Abstract

The rapid advancement of information technology, particularly in the field of computer science, has significantly influenced ethical awareness in modern society. Ethical concerns in computer use are increasingly discussed due to growing public anxiety about privacy, data ownership, and access rights. While technological innovation provides substantial benefits, unethical practices such as software piracy, data manipulation, and privacy violations pose serious challenges. Computer ethics extends beyond technical issues it involves understanding how individuals and organizations apply moral principles when utilizing technology. This study investigates ethical and social problems in the management of information technology and examines the role of moral and social values in shaping ethical information system management. The findings emphasize the importance of ethical comprehension and awareness among technology users to promote responsible, transparent, and socially beneficial IT practices that align with both moral and legal standards.

Keywords

Ethics; Social Issues; Information Technology Management

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Introduction

In today's digital era, information systems have become the backbone of organizational operations, shaping the way institutions manage resources, communicate, and make strategic decisions. An information system integrates information technology (IT) with human expertise and organizational procedures to collect, process, store, and distribute valuable data. The primary objective of such systems is to transform raw data into meaningful information that supports planning, management, and control functions within organizations. As technological sophistication increases, information systems have evolved from simple data-processing tools into complex infrastructures that drive innovation, competitive advantage, and global interconnectivity.

However, alongside their benefits, the rapid diffusion of IT has given rise to ethical and political challenges that complicate the digital landscape. Ethical issues emerge when actions, though legally permissible, conflict with moral or societal values—raising questions about fairness, integrity, and accountability. Meanwhile, political issues arise when control over information systems translates into unequal power relations, enabling certain entities to dominate access, surveillance, or decision-making. These dynamics demonstrate that information systems are not value-neutral; they operate within social contexts that reflect cultural norms, institutional interests, and moral tensions. The intersection between ethical, social, and political dimensions thus highlights how technology both shapes and is shaped by society.

From a philosophical perspective, ethics serves as the systematic study of moral values and human conduct, while morality functions as the normative code that guides individual and collective behavior. In the digital context, ethics provides a critical framework for evaluating how information is created, managed, and utilized. The concept of information ethics, first articulated in the 1980s by scholars such as Koenig et al. (1981) and Hauptman (1989), emerged as a response to growing concerns over confidentiality, reliability, and integrity in the management of digital information. Reitz (2004) later defined information ethics as the study of the moral principles governing the creation, organization, dissemination, and use of information resources—emphasizing that information management is not merely a technical process but also a deeply moral one.

The globalization of information systems has expanded the scope of these ethical debates. Technology now transcends national boundaries, connecting societies and fostering modernization, innovation, and international collaboration. Yet, such connectivity also magnifies the potential for misuse. Cases of software piracy, data theft, misinformation, and privacy invasion illustrate how technological tools can be weaponized against individuals or institutions when ethical responsibility is neglected. As digital systems become embedded in nearly every aspect of life—governance, education, commerce, and culture—the consequences of unethical technological behavior extend beyond technical domains into social and moral spheres, influencing trust, justice, and human rights.

Given this complexity, the ethical use of IT requires more than compliance with laws or technical standards—it demands moral awareness, professional integrity, and accountability. Ethical IT practices encompass respect for intellectual property, transparency in data management, and protection of individual privacy. Furthermore, the rise of artificial intelligence, big data analytics, and cloud computing introduces new ethical frontiers, such as algorithmic bias, data ownership, and digital surveillance. Therefore, the cultivation of ethical literacy and awareness becomes indispensable for IT professionals, policymakers, and users

alike. Education in digital ethics not only prevents abuse but also ensures that technological progress aligns with societal well-being and human dignity.

This study seeks to explore the ethical, moral, and social challenges inherent in information system management. It emphasizes the necessity of embedding ethical reasoning within the design, implementation, and governance of information technologies. By examining how moral awareness can guide decision-making in digital environments, this research aims to contribute to the broader discourse on responsible innovation—ensuring that the evolution of technology continues to serve humanity rather than undermine it. Ultimately, the study underscores that technological advancement must be harmonized with ethical reflection, as the sustainability of digital transformation depends on its ability to uphold human values and social justice.

Methodology

This study employs a literature review methodology, which is a structured and analytical approach to synthesizing theoretical concepts, research findings, and empirical evidence from existing scholarly works. The literature review method was chosen because it allows researchers to develop a comprehensive understanding of a phenomenon based on accumulated academic knowledge rather than primary data collection. According to Dewanto (2015), the literature study approach enables systematic exploration of prior research to identify conceptual relationships, theoretical gaps, and practical insights that inform new interpretations of existing issues. In this study, the method is particularly suitable for examining ethical challenges in information system management, as such topics often require conceptual depth, philosophical analysis, and multidisciplinary integration rather than quantitative measurement.

The data sources for this research consisted of books, peer-reviewed journal articles, and conference proceedings related to information ethics, moral philosophy, digital governance, and information system management. Materials were obtained through academic databases such as Google Scholar and Mendeley, ensuring that only credible and up-to-date sources were included. The inclusion criteria prioritized relevance to ethical theories, case studies on IT governance, and scholarly discussions addressing the moral dimensions of technology. Government reports, institutional publications, and professional ethical codes were also consulted to provide contextual and regulatory perspectives. Through this diversified source base, the study aimed to ensure analytical rigor, depth, and objectivity.

The analytical procedure followed a systematic and iterative process consisting of three main stages:

1. Identification and Collection of Literature
   The initial stage involved identifying relevant academic materials through targeted keyword searches such as information ethics, IT governance, moral responsibility, and digital ethics in organizations. The researcher filtered sources based on publication credibility, relevance, and conceptual contribution.
2. Critical Review and Thematic Categorization
   The second stage entailed a close reading and critical evaluation of selected sources to extract recurring concepts and theoretical arguments. These findings were then categorized into major analytical themes:

a. Core ethical and social issues related to the application of information technology in organizational contexts.
b. Influence of moral and societal values on ethical IT practices and decision-making.
c. Interconnection between ethical awareness and responsible IT governance, emphasizing how moral consciousness informs professional conduct and policy formulation.

3. Synthesis and Conceptual Integration
In the final stage, insights from the literature were synthesized to construct a coherent analytical framework linking ethical theory, moral values, and information system governance. The integration of these dimensions allowed for a holistic understanding of ethical management in information systems—bridging theoretical abstraction with practical implications.

The output of this methodological process is an integrative synthesis of theoretical and empirical perspectives that elucidates how ethical awareness and moral reasoning can shape responsible IT governance. Rather than seeking numerical generalizations, this qualitative approach focuses on interpretive depth and conceptual coherence. It enables the researcher to formulate normative recommendations for strengthening ethical standards in the management of information systems.

Through this literature-based design, the study not only compiles prior research but also contributes to the ongoing discourse on information ethics and digital responsibility. By examining the intersection between moral values and technological governance, this methodology supports a reflective and context-sensitive understanding of how information systems can be managed ethically in an increasingly complex digital environment.

Results and Discussion

The Influence of Social Issues on Information System Ethics

The emergence of new information technologies has redefined how data, knowledge, and creativity are produced and shared. However, these advancements also create ethical tensions regarding ownership, access, and control over digital resources. Arief (2009) identifies four primary ethical and social concerns that must be addressed in the management of information systems: (1) protecting intellectual property rights, (2) establishing accountability for information system usage, (3) defining standards for security and quality to ensure user safety, and (4) preserving social values that sustain human welfare and quality of life. These dimensions emphasize that technological innovation must not outpace moral and social responsibility.

In the digital age, traditional intellectual property frameworks have become increasingly inadequate. The ease with which digital materials can be copied, modified, and redistributed erodes the effectiveness of conventional copyright protections. Digital duplication blurs the boundaries between legitimate sharing and unlawful reproduction, often resulting in widespread content piracy. Such practices undermine innovation and discourage creators from producing original work, as the financial and moral incentives for creativity become weakened. This erosion of ethical respect for intellectual property contributes to an economic imbalance in the creative industries, where digital exploitation often benefits intermediaries rather than originators.

Empirical studies by Ridho (2016) and Fadly and Wantoro (2019) demonstrate that social context plays a decisive role in shaping ethical digital behavior. Factors such as cultural norms, community attitudes toward information sharing, and the level of digital literacy significantly influence how individuals perceive ethical responsibility in technology use. In societies where digital ethics are not embedded within educational systems, unethical practices such as software piracy, plagiarism, or privacy violations are often normalized. Therefore, the development of ethical and sustainable information systems requires not only technical regulation but also a cultural transformation that elevates public understanding of data ownership, privacy protection, and digital rights.

Promoting public awareness about these issues becomes a cornerstone for cultivating digital responsibility. Education and public campaigns should emphasize that data and digital content are intellectual assets deserving the same ethical respect as physical property. By fostering societal understanding of intellectual ownership and moral accountability, it is possible to create a digital ecosystem that upholds fairness, transparency, and respect for creative labor. Furthermore, integrating social ethics into digital policy frameworks ensures that technological progress contributes positively to collective well-being rather than exacerbating inequality or exploitation.

The Influence of Societal Ethics on Information System Ethics

Ethics, at its core, concerns the human capacity to discern right from wrong and to act according to moral principles. Despite the extraordinary progress in computing and automation, ethical dilemmas in information technology have not diminished—they have intensified. Moor, as cited in Permana (2013), defines computer ethics as the discipline that analyzes the social impacts of computer technology and formulates policies to ensure its responsible and humane use. This definition underscores the idea that technology is not ethically neutral; it embodies values that shape human interaction, decision-making, and power relations.

Information technology introduces at least four principal ethical pressures, as described by Marina et al. (2021).

1. Enhanced data accessibility, which increases the potential for unauthorized access, misuse, and privacy intrusion. The ability to collect and analyze massive datasets brings efficiency but also magnifies the risk of surveillance and discrimination.
2. Automation of decision-making, which raises issues of accountability. When algorithms make or influence decisions—such as credit scoring or employee evaluations—questions arise regarding bias, fairness, and the locus of moral responsibility.
3. Digital anonymity, which enables unethical actions without personal accountability. The shield of anonymity often emboldens individuals to commit cybercrimes, spread misinformation, or engage in harassment without fear of detection.
4. Legal lag, referring to the gap between rapid technological innovation and the slower pace of legal adaptation. As laws struggle to keep up, ethical reasoning becomes the first and often only guide for responsible behavior in unregulated digital spaces.

To address these challenges, Chief Information Officers (CIOs) and other organizational leaders must act as moral stewards in ensuring that IT systems are aligned with both ethical principles and societal expectations. Ethical governance requires policies that balance innovation with responsibility—ensuring transparency, accountability, and respect for users'

rights. Technical safeguards must be complemented by human-centered approaches that prioritize integrity and empathy in digital design and implementation.

Moreover, moral education and cultural awareness play pivotal roles in shaping ethical behavior in the information age. Ethical competence should not be viewed as an optional skill for IT professionals, but as an integral part of professional identity. Institutions must therefore integrate courses on information ethics, digital citizenship, and moral reasoning into technology curricula and organizational training programs. Culturally contextualized moral education can strengthen the ethical foundation of digital societies, ensuring that technological progress remains anchored in human values.

In conclusion, the intersection between social dynamics and ethical responsibility determines the moral trajectory of information system development. Both individual and institutional actors share responsibility for ensuring that technological systems reflect justice, fairness, and respect for human dignity. Ethical information system management is thus not only a matter of compliance with law or policy but a reflection of a society's collective conscience in the digital era.

Conclusion and Recommendations

The growing integration of information and communication technology (ICT) into everyday life necessitates heightened ethical awareness. Understanding the principles of ethics and morality serves as the foundation for responsible technology use. Violations such as unauthorized data access, software piracy, and privacy breaches demonstrate the urgent need for ethical regulation and accountability in the digital realm. Based on the literature review, the following hypotheses can be proposed for future empirical research:

1. Moral values significantly influence information system ethics.
2. Social issues affect ethical decision-making in information system management.
3. Societal ethics contribute to the overall ethical framework of IT usage.

Developing ethical information systems ensures that technological progress supports fairness, transparency, and social well-being.

Disclosure Statement

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Biographical Notes

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