

## Managing Information Technologies in the Era of Digital Transformation and its Impact on Ethical Awareness Values

Hadj chaib<sup>1</sup>

<sup>1</sup>Professor A, University of Saida, Dr. Moulay Taher (Algeria).

The E-mail Author: [hadj.chaib@univ-saida.dz](mailto:hadj.chaib@univ-saida.dz)

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### Abstract

The study investigates the reality of ethical values, particularly in the context of digital transformation, in managing various modern technology techniques. It approaches this from several angles focusing on functions and the degree of influence on the knowledge society, delving into the field of computing and posing various challenges regarding privacy breaches. Consequently, it emphasizes the necessity of setting limits on these operations by engaging with various clients and partners to clarify and understand various ethical values, especially with the proliferation of artificial intelligence technologies in libraries and documentary institutions. Hence, it employs a descriptive-analytical approach. The study yields several results, including the significance of cloud computing and its impact on security systems, the increase and development of ethical standards due to ethical problems related to the digital age, and the moderate level of awareness among researchers and stakeholders about ethical values in the digital age. Therefore, the study recommends the need for more attention to be directed toward specialties related to software and information technology, as well as ethical standards.

**Keywords:** Ethical awareness, Ethical values, Modern technologies, Library, Knowledge society.

### Introduction

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<sup>1</sup>The sending author: Hadj chaib, Email: [hadj.chaib@univ-saida.dz](mailto:hadj.chaib@univ-saida.dz), Member of the Research Unit in Human Sciences for Philosophical, Social, and Humanitarian Studies (URSH), Faculty of Social Sciences, University of Oran 2, Mohammed Ben Ahmed.

The German philosopher Jürgen Habermas emphasizes that technology has turned into an ideology, with consumption being one of its main pillars. Everything becomes consumable, leading to the creation of constant and artificial desires for the consumer. The appetite for digital consumption has increased, making humans prisoners of the present moment they observe and immerse themselves in its virtual world. Amid discussions about ethics in the digital age, we find that this digital consumption replaces the concepts of happiness and eternity for humans. Now, happiness is achieved through the number of followers one has on social media pages, while eternity is linked to one's ability to influence and transition into the realm of dominant fame. This has led some digital space celebrities to resemble rootless beings, shifting happiness and eternity to the virtual world, which now has its consumeristic requirements in the digital realm. These requirements include the quality of smartphones, their storage capacity, and their ability to quickly connect to the internet with high quality. The desire for digital consumption has become an insatiable abyss that never quenches, with a perpetual thirst for digital consumption. In his book "The Constitution of Ethics in the Quran" by Dr. Mohammed Abdullah Daraz, published in 1950, this deviation towards turning life into consumption and its reflection on ethics in various forms was noted (Achour, 2002).

The intellectual and ideological creed of the twenty-first century is represented by the compound creed of globalization, the network society, and the knowledge society. The parties benefiting from and managing this trinity are the major central countries, while most of the world's countries represent the periphery. The scope of this margin expands or contracts depending on the degree of satisfaction or the circumstantial, strategic interests of the central countries.

These technological advancements have cast their shadows on many developing countries, burdening them with new challenges they hadn't anticipated. This change has affected various aspects of political, economic, security, and social life, leading to the emergence of new patterns of cultures and behaviors. This situation is attributed to the dominance in the information content industry and the extent of the impacts it leaves, known as cultural globalization. Here, the trend and advocacy are increasingly towards digital democratization.

Therefore, the contemporary world is facing ethical problems that are increasing day by day, as practical and conscientious solutions are lacking. Literary works that study ethics often lack any statements about ethical relationships. In some cases, these relationships are

confined to the concept of "Ethical Behavior," being considered in terms of awareness rather than real connections between people. Therefore, it is necessary to distinguish between the concepts of behavior and ethics and the difference between them. The concept of behavior encompasses ethical connections, while the concept of ethics pertains to moral awareness, and ethical theory is the understanding, explanation, and analysis of ethical standards and principles. The focus of this research is directed towards the ethics of computing and information technology in the information society.

Indeed, information technology has entered people's lives in various new forms everywhere, such as personal computers, smartphones, internet technologies, artificial intelligence, and robots. At the core of all these technologies lies a form of computing, with which users interact mostly through applications and other software operating systems. These technologies open up new avenues, such as massive multiplayer online games, where humans interact with each other in novel ways. Information technologies are used to record, transmit, aggregate, or manipulate information through the use of computer technologies.

Today, controlling information has become a source of power and can be the highest form of political power in the information economy. We live in a world rich with data, where the technological production, recording, and storage of vast amounts of data have evolved rapidly. The fundamental ethical issue is that when we collect and/or store and/or access information, it is necessary to do so properly to be seen rationally as fair and in everyone's interest. The ethical problem arises when our information is collected, stored, and used by third parties without our knowledge or when it is done with only our implicit consent. Social institutions traditionally exercising this power include religious organizations, universities, libraries, healthcare providers, government agencies, banks, and corporations. These entities have access to stored information, which grants them a certain level of power over their clients and constituents. Today, every citizen has access to more of this stored information without the need for traditional means, granting them a special and significant degree of social power. Based on this, we will attempt to address the ethical issues of digital and computational usage in building an informational society.

### **Research Problem**

Technology has made it easier for humans to manage their lives efficiently. However, the current reality indicates that many people are either unaware of or ignore the fundamental objectives behind the invention and development of these technologies. Consequently, there is a lack of proper usage, particularly concerning the ethical awareness of the internet. Issues such as privacy violations, information espionage, identity theft, infringement of intellectual property rights, and plagiarism, where individuals steal others' intellectual output and claim it as their own, are prevalent.

Several studies have highlighted the importance of developing university students' awareness of the ethical values needed to deal with the implications of the technological revolution. For instance, the study by (Ikhlef, 2009) emphasized three ethical issues: intellectual property rights, privacy, and electronic piracy.

Given that universities are among the most important educational institutions in society in the digital age, they occupy the pinnacle of the educational hierarchy. They house the intellectual and scientific elite of society and prepare students in various aspects—scientific, ethical, social, psychological, and more. Consequently, universities bear the responsibility of fostering ethical values in their students, helping them develop the values necessary to navigate our current era.

The problem of this study;therefore, revolves around the values of ethical awareness concerning digital transformation in the management of information technologies, considering their functions and impact on the knowledge society.

### **Importance of the Research**

**1.Addressing a contemporary and significant topic:** The research focuses on the digital age, which is of great importance due to the challenges it presents. The absolute dominance of information and communication technology necessitates moving beyond the traditional methods prevalent in society.

**2.Raising awareness among youth:** The research aims to sensitize and educate young people, highlighting the significant role they play in building the future and facing the challenges that lie ahead. They bear the primary responsibility for adopting new technologies and understanding their ethical use, contributing positively to societal development.

## **Research Objectives**

1. Understanding the intellectual and philosophical framework of ethical awareness values in the digital age: The research aims to explore the theoretical and philosophical aspects that shape ethical awareness values and their application in the digital age, including the concepts and frameworks influencing ethical behaviors in the use of technology.
2. Identifying the reality of values in the transition to the digital age in the knowledge society: The research aims to analyze and evaluate how ethical values are transformed and adopted in the digital knowledge society, understanding the impact of this transition on individuals and society as a whole, as well as identifying the challenges and opportunities arising from this transformation.

## **Research Questions**

1. What is the intellectual and philosophical framework of ethical values in the transition to the digital age?
2. What is the current state of ethical values among youth and their impact on issues related to digital transformation?
3. Where does the value of ethical awareness manifest in the management of information technology?
4. How does the ethical aspect influence the digital transformation of the knowledge society?

## **Research Methodology**

The researcher adopts a descriptive methodology, allowing them to collect data and information from relevant studies and literature related to the research topic, and analyze them to benefit from them in constructing the theoretical framework and the scientific and philosophical approach to the subject.

## **Definition of ethics**

It is the moral responsibility to intentionally and voluntarily choose the values that one should follow, such as goodness, truth, justice, virtue, which can affect us or others. There are many definitions that focus on the philosophy of ethics, as it relates to the behavior of

individuals such as individuals and also relates to conscience, which often varies from one individual to another. The Algerian researcher AbdelrahmanAzziz, the proponent of the theory of moral determinism in media, believes in the necessity of not confining interest in the ethical issue in the Arab-Islamic region to the preaching and jurisprudential field only, but also transferring it and caring for it at the academic level based on rational analysis.

## **2. Types of ethics**

### **2.1. Professional Ethics**

The rules of professional ethics refer to two types of standards: principles and rules of professional conduct. The first type refers to the general principles of the overall framework within which the rules of professional conduct are defined, while the second type is what is expected to be voluntarily complied with and adhered to ethically by individuals belonging to the institution.

### **2.2. Information Ethics**

This refers to the expected legal behavior of individuals who use information. Documents from the United Nations Educational, Scientific and Cultural Organization (UNESCO) mention that the ethical principles of information societies have emerged from the Universal Declaration of Human Rights. These principles include the right to freedom of expression and the dissemination of information.

### **2.3. Information Security Ethics**

Information security is considered an ethical value that has an impact on the delivery and access to user information. When we grant third parties authority over our information in exchange for the services they provide, with sufficient information, one's identity can be completely stolen and used to facilitate fraud and theft (Epstein, 2007). This type of crime has rapidly increased since the emergence of digital information technologies. It can destroy the lives of victims as they try to reclaim things like their credit ratings and bank accounts. This has led to the design of computer systems that are difficult to access, and the growth of a new industry dedicated to securing computer systems. However, even with these efforts, the economic and social impact of cybercrime continues to grow at an alarming rate. In February 2018, cybersecurity company McAfee issued a report estimating the global cost of cybercrime to have risen from \$445 billion in 2014 to \$608 billion, or 0.8% of global GDP in 2018,

without accounting for the hidden costs of increasing conflicts and loss of productivity in combating cybercrime (McAfee, 2018).

The difficulty in achieving full digital security lies in the fact that the ethical value of security can conflict with the ethical values of openness and sharing that were standards for many early information technology pioneers. Steven Levy (1984) describes in his book "Hackers: Heroes of the Computer Revolution" a type of "hacker ethics" which includes the idea that computer systems should be freely available and decentralized to facilitate "world repair" and for greater social justice (Levy, 1984).

Philosophers have debated the conflict of these values. While many hackers Levy encountered argue that hacking isn't as dangerous as portrayed, as it mostly involves acquiring knowledge hidden in the workings of information technology systems, Eugene Spafford counters this by arguing that there is no entirely harmless computer intrusion, and the harm involved precludes ethical hacking except in extreme cases (Spafford, 1992). Kenneth Himma largely agrees that hacking activities are unethical, but political hacktivism may have some ethical justification.

Similar value divisions occur in other areas, notably in intellectual property rights. What information technology adds to these ongoing ethical debates is the ease of access to information that others may want to control, such as intellectual property, sensitive information, and pornography (Loridi, 1999), as well as providing technical anonymity for both users and those providing access to relevant information (Nissenbaum, 1999).

Since the capabilities of designing information technology itself impact the lives of its users, the ethical obligations of the designers of these technologies will guide the path of society, and technicians will then determine our commitments to specific ethical values (Bynum, 2000).

### **3. Information Technology as an Ethical System:**

American philosopher John Dewey proposed a theory of inquiry in the early 20th century (see John Dewey entry), based on the instrumental use of technology. He also had an expansive definition of technology that not only included common tools and machines but also information systems such as logic, laws, and even language. Dewey viewed us as having a "transactional" relationship with all these technologies through which we discover and build

our world. This perspective is useful because it allows us to enhance the idea that information technology related to ethics is not impossible, and it also highlights the idea that the relationships and transactions between human means and those between humans and their creations have significant existential similarities.

Although Dewey did not clearly understand the forthcoming revolutions in information technology, his theory is useful to us because his proposal is that ethics is not just a theory but application, and problem-solving in ethics is akin to problem-solving in algebra. If Dewey is correct, there is an intriguing possibility that ethics and ethical problems can be calculated, and thus there should be a possibility of creating information technology capable of encompassing them (Hickman, 1990).

#### **4. Ethical thinking systems**

In 1974, philosopher Mario Bunge proposed the idea of "technoethics" with the argument that ethical philosophers should emulate the way engineers deal with problems. Instead of categorical imperatives, engineers use a method of inference: "If A produces B, and you prefer B, then choose A. If A produces B, and C produces D, and you prefer B over D, then choose A over C." In short, the rules he devised are based on fact and value, acknowledging that this is the way ethical rules should be formulated, as behavioral rules derived from scientific statements and preferential judgments. In summary, ethics can be considered a branch of technology (Bunge, 1977).

Taking this view seriously means that developing rules for information technologies is also establishing specific ethical systems in which human and artificial means interact through ethical transactions, at least sometimes. Therefore, information technology specialists may create ethical systems whether they are aware of it or not, and whether they desire this responsibility or not.

#### **4Aspects Covered by Information Ethics**

##### **4.1Protection the Right to Privacy:**

This involves not publishing any information that aims to demean, diminish, or harm an individual's dignity and reputation. The right to privacy is intended to protect individuals from unwarranted intrusion into their personal lives without their consent. The Algerian Media Law

of 2012, in articles 92-93, stipulates the necessity to refrain from glorifying violence and racism and from publishing or broadcasting images or statements that harm public morals. It also prohibits violating individuals' private lives and honor. Examples of privacy violations include:

- Publishing and fabricating false news.
- Using hidden recording devices.
- Illegally seizing and accessing data and information.
- Casting false light for the purpose of ridicule.
- Using a person's image or name in commercial advertisements or promotions without their permission and consent.
- Publishing false comments or news related to personal or family life.
- Disclosing personal secrets.

## **2. Violation of Privacy:**

It is also important to leverage social media and the "Enterprise 2.0" (integrating social networks and collaborative technologies online into operations to facilitate communication with customers, partners, and employees using "Web 2.0" technologies, such as blogs, wikis, public bookmarking, and social sites like Facebook or Twitter), as well as "Web 3.0" (which uses artificial intelligence to make contextual searches smarter without search terms as in the current approach), Digitization may lead to job losses during the transition period. The most challenging issue is the violation of privacy and information security, which is a significant obstacle to organizations adopting digitization due to the ease of being hacked by viruses, eavesdropping, espionage, and tracking. The situation worsened with the advent of 5G mobile networks and the spread of artificial intelligence technologies and edge computing (Ahmed, 2021).

## **5. Ethics of Information Computing:**

The main development in the field of information computing is that it is not only a subject of ethical debate, but it has also begun to be used as a tool in ethical discussions. Since artificial intelligence technologies and applications are a type of automated problem-solving

solution, and ethical discussions are a challenge, it was only a matter of time before automated ethical reasoning technologies emerged. This is still an emerging technology, but it has several intriguing ethical implications, which will be elucidated below. The coming decades are likely to witness several advancements in this field that will necessitate the immediate attention of ethicists. Susan and Michael Anderson compiled a number of articles on this subject in their book *Machine Ethics* (2011), and a portion of Rocci Luppincini's research was devoted to this topic in his work *Research on Technoethics* (2009).

### **5.1. Computing ethics**

Ethics, generally, is a field that studies questions of values, which is the judgment of whether a human action is good or bad in a specific situation. Ethics are the standards and rules upon which many decisions and actions are based when there is usually no clear answer, as defined by Dr. Edward Gehringer (1997) specializing in computer ethics and one of the best to delve into this subject specifically (Aljabri, 2021).

Ethics of computer usage involve interactions between the user and others. This type of ethics can occur between the user and other individuals, as well as between the user and the machine (the computer). As we mentioned earlier, this type of ethics can be regulated by implementing certain systems to protect people and users, as well as by enacting laws to protect the devices themselves. However, the fundamental axis for implementing these systems remains personal conscience, which we have previously recognized as being of paramount importance.

One of the most important ethics of computer usage between the user and others are:

- Respecting the intellectual property of others, it is necessary to attribute the source of ideas, images, and articles taken from open sources on the Internet.
- Not stealing works and claiming them as one's own.
- Not copying others' work, such as software, and using it for free. The solution here is to use open or shared sources, which may encourage professionals and enthusiasts to produce software suitable for our society.
- Maintaining the privacy and secrets of others, whether by not disclosing them or even searching for them in forums or elsewhere.

- It is also worth mentioning not to harm others by accessing their files (Hacking), tampering with them (Cracking), or even creating and sending viruses and malicious software. The expected results of computer ethics (Aljabri, Computer Ethics, 2021).

## **6. Identifying the problems:**

Identifying ethical issues as they arise, as well as determining how to address them, has traditionally been problematic. In solving problems related to ethical issues, Michael Davis proposed a unique method for problem-solving. In Davis's model, the ethical issue is identified, facts are checked, and a list of options is generated by considering relevant factors related to the problem. The actual action taken is influenced by specific ethical standards.

Ethical standards: Many national and international professional associations and organizations have issued codes of ethics to provide basic behavioral guidelines for computing professionals and users. These include:

- Association for Computing Machinery: Code of Ethics and Professional Conduct
- Australian Computer Society: ACS Code of Ethics - Code of Professional Conduct
- British Computer Society: BCS Code of Conduct - Code of Good Practice (Retired May 2011)
- Computer Ethics Institute: Ten Commandments of Computer Ethics
- IEEE: IEEE Code of Ethics - IEEE Code of Conduct
- International Association of Systems Managers: Code of Conduct in Systems Management (<https://en.wikipedia.org/wiki/>).

## **1. "Digitization" Defining the Term**

"Digitization" is a modern term that has seen variations in concepts and standards. There has been disagreement over the definitions of the English terms "Digitalization, Digitization, Digital Transformation." In some fields, the distinction between them was clear, while confusion arose in others. It is possible to translate "Digitization" into (al-Raqmna) with the connotation of "making digital," while "Digitalization" can be translated into (al-Tarqimiya) with the connotation of "digitalization." Over the past fifteen years, there has been a decrease

in the average use of the term (al-Raqmna) while the use of the term (al-Raqmna) has increased, and then the use of the term (al-Tahawul al-Raqami) has escalated in recent years.

### **7.1. Definition of digitization**

It is the representation of analog data (found in documents, drawings, microfilm, photographs, electronic and audio signals, medical records, websites, identity cards, government and banking data) by a digital series of "bits" and "bytes", for processing them with computer algorithms easily and effectively. "Digitization" also encompasses leveraging digital technologies to transform business models and operations, thereby creating fresh avenues for wealth creation and sustainable development. Moreover, it involves converting processes into digital formats and breaking down barriers between humans and information and communication technologies through the application of artificial intelligence techniques, ultimately achieving higher economic and social efficiency and productivity.

#### **7.1.1. Digitization**

Since the mid-20th century, digitization has slowly infiltrated some sectors, then surged with the emergence of the Internet in the 1990s, and further strengthened with the rise of big data in the current millennium (2013 AD), making ones and zeros dominate the world. This binary encoding (0 and 1), the language of computers, increasingly engulfs everything day by day, from children's play to the institutions and governments of countries 'going digital'.

Digitization has reshaped the way the world lives across most of its economic and social dimensions, to the point where it is rare to find someone with no connection to 'digitization,' either closely or remotely. Those who are not familiar with how to deal with digital information technologies are now referred to as 'digital illiterates' (Ahmed A, 2019)."

The proliferation of groundbreaking modern technologies (meaning innovative technologies that overthrow the old and create an entirely new environment), such as artificial intelligence, quantum computing, 3D printing, and fifth-generation mobile networks (expected to be implemented by 2023 AD), will radically change human life. These technologies will transfer and process big data faster, connect a vast number of smart devices, individuals, cloud computing, and artificial intelligence applications.

Digitization will not just boost economic gains but will also play a vital role in accomplishing the United Nations' Sustainable Development Goals. The full benefits of these groundbreaking technologies cannot be realized without digitizing every aspect of the world.

The buzz around digitization has intensified with the widespread adoption of the Third Information Society (the First being the era of printing over five hundred years ago, followed by the Second during World War II). Now, every individual in this society owns a mobile phone, with 70% of its population subscribed to mobile broadband, and half of them using the internet and computers.

By the upcoming year 2023, it is anticipated that 45% of enterprises will employ artificial intelligence experts, with 75% of them experimenting with AI, and 30% integrating it into their production processes. Moving forward to 2024, 75% of businesses will be exploring cutting-edge technologies, and blockchain is forecasted to yield \$3.2 trillion by 2030.

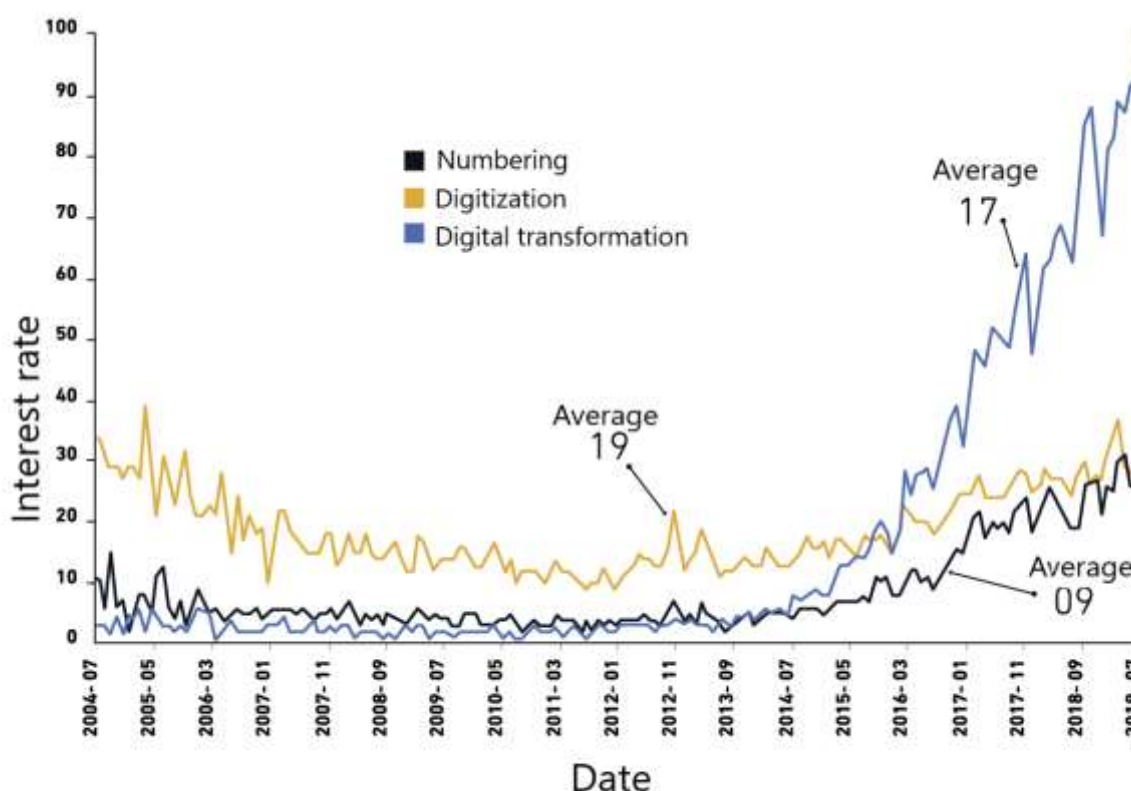
Thanks to the proliferation of the information society and big data, it has become possible to leverage digitized data and processes to feed into artificial intelligence systems, playing an economic and developmental role in areas such as: automation (including automated agriculture, robotics, self-driving vehicles, and drones), augmented analytics (utilizing machine learning and natural language processing to enhance business intelligence), Self-improvement (such as employing artificial intelligence algorithms in self-development) and digital twins (referring to digital representations that mirror physical objects, processes, and systems), Edge computing (referring to the transition of digital data processing to the data source itself) and immersive applications (such as augmented reality, a technology that overlays virtual objects and information onto the real environment to provide additional knowledge), However, it's the antithesis of virtual, based on projecting real-world objects into a virtual environment, and mixed reality is a blend of the two), quantum computing (enabling much faster processing than classical computers using quantum bits or 'qubits,' not just 0 and 1 like digital computing but a mixture of both), Blockchain, a digital innovation functioning on the premise of distributed ledger, ensures trust without intermediaries in financial, governmental, and healthcare transactions. Similarly, smart digital spaces refer to interactive environments—both digital and physical—where humans and intelligent technological systems engage openly, communicate, and synchronize, exemplified by smart cities.

## 7.2. Digitization: A Revolutionary Development Process

Digitization is a radical development process in the way an enterprise operates, utilizing modern digital technologies in alignment with the goals of the organization and its customers.

Analog data comprises physical signals such as temperature or humidity, which are converted into "volts" or "amperes" using sensor devices like thermocouples. Temperature, as an instance, constitutes analog data, and the voltage representing temperature similarly falls under analog data.

In order to process analog voltage data on a computer, it needs to be converted into digital data in the form of a series of 'bits.' A 'bit' represents an electrical pulse in digital processors and is symbolized by one of two binary numbers: either 0 or 1. As for a 'byte,' it's a digital information unit in computing and communications, consisting of 8 bits.



Draw 1: Trade of Terminologies: "Numbering", "Digitization", "Numerical" and Digital Transformation"

## 8. The Modern Information Society: The Contemporary Concept

The term 'Information Society' refers to a society where the production, management, and exchange of information hold significant importance in achieving economic and social development, as well as improving living conditions and working environments. In this context, information and communication technologies are utilized as a means and an end to bring about change, acting as a mediator across all aspects of social, economic, commercial, cultural, educational, health, scientific, and technological life, and at the policy level, with the aim of transitioning to a knowledge-based economy (UNESCO, 2016).

In 2008, Algeria introduced a strategy known as 'Algerie2013.e,' aimed at widespread internet connectivity, digitization of public services, and legal framework consolidation. The state made digitization a cornerstone for the success of the recently established 'Algeria Vision 2035' strategy, initiated by the Ministry of Finance, which aims to develop and diversify the national economy (Beshari, 2020).

### **9. Information technology, what are professional ethics and why are they studied?**

In the last decade, ethical concerns in Information Technology (IT) have come to the forefront of IT discussions. Various ethical scenarios have emerged, ranging from accessing individuals' private information to manipulating and sharing large corporate datasets. How ethics play a role in Information Technology, and why it is important to continue studying what is known as "Technology Ethics," to ensure that our computer-guided future is as ethical as possible?

### **10. Information Technology Professional**

At its basic level, Information Technology involves storing, using, processing, and/or transmitting information through a computer system. Information Technology professionals fulfill diverse roles in the maintenance of complex computer systems, encompassing tasks such as hardware and software creation, repair, and management. Software developers and programmers are tasked with coding computer programs, designing websites, and developing electronic applications. These technical processors design and program across multiple systems, enabling the integration of common technology. Conversely, individuals working in IT support and network management handle issues related to pre-existing hardware and software. They troubleshoot problems arising in personal and shared computer systems, including network connectivity failures and virus infections, They assist in finding solutions

as quickly as possible. They participate in processes that prevent computer systems from malfunctioning, such as managing network updates and dealing with new software installations.

### **11. Why study ethics in information technology?**

Why is it important to study ethics alongside information technology? IT specialists, inherently, have access to vast amounts of sensitive information. Given that they operate in diverse settings – including healthcare, business, and banking – the information they can access and handle can raise security issues. Many IT professionals are capable of accessing information that grants them a degree of power over an individual or group, even if they don't have direct intentions to use this power over anyone. Many well-intentioned IT professionals may not consider the ways in which this power could be misused. Despite the genuine privacy violations that can occur in IT work."Currently, there is no standardized policy for the ethics of information technology. IT professionals may not be aware of the ethical questions impacting their daily job functions. By studying ethics alongside information technology, professionals can become more aware of the boundaries they should not cross and avoid harming employers, clients, or even themselves. Applying ethical principles in information technology can help reduce harm and prevent misuse of sensitive information. This branch of ethics, termed 'Technoethics' – the intersection of technology and ethics – can prevent IT professionals from sliding into an ethical gray area as our technology-centric world continues to expand. This includes often individuals' email accounts, and workplace or banking information, healthcare information, and more. Although most IT professionals do not pry into this information, these technologies are capable of accessing such information while working on an individual or interconnected computer system. This can raise concerns regarding personal privacy and at the corporate level. Is it ethical to view this information, and perhaps share it with company executives or managers?

#### **• Data sharing**

As technology has expanded, our personal browsing data has become accessible to networks and information technology companies (for example, receiving targeted advertisements from online stores). Many technology companies have the opportunity to sell this data to companies that can enhance individual web experiences for customers. Although

this may appear innocuous, some deem it unethical to sell an individual's web data without their explicit consent. The access to their personal information and the capability to manipulate, delete, or disclose it could lead to unethical surveillance possibilities, causing employees to feel a lack of trust in their employers and technical teams.

### • **Security + Responsibility**

IT professionals are frequently tasked with resolving the chaos caused by infiltrators and viruses, but how far can one pledge to shield the company from them? Those in IT aiding security concerns should exercise caution in making unsubstantiated assurances (e.g., 'this software will prevent any breaches') or risk being held accountable in the event of a breach. Additionally, these professionals should be transparent about the expenses/resources required for installing different programs without persuading companies to pay additional fees for services they might not require.

### • **Artificial Intelligence programming**

As artificial intelligence technology proliferates across most websites and devices, some IT professionals grapple with ethical dilemmas concerning the extent of information that should be collected using AI bots and whether it's unethical not to engage with the consumer they're conversing with. A real person in customer support conversations.

### **The ethical challenges for IT professionals**

What kind of ethical issues might IT professionals face at work? Since IT professionals often have the ability to view files, data, and email messages stored on their computers, if an individual works in the field of information technology for a company and is able to take a quick look at the applications, images, emails, and documents of an employee in that company, should they monitor downloads or email messages? Is there a way to justify monitoring private information?

Just because an IT professional has the ability to access these files doesn't imply they should; after all, you wouldn't want a colleague rummaging through your personal belongings. While IT professionals might justify the desire to monitor downloads to prevent potential downloading of NSFW (Not Safe for Work) content or viruses, failing to disclose to company employees the specific information being monitored could contravene some ethical

guidelines. There's also an ethical issue concerning accessing information about a particular company or organization. What if there was something in their files or documents indicating harmful activity? What if this led you to work for their competitor and you were able to assist their competitor in outperforming them?

Yet, it also requires responsibility to assess how acquired knowledge is used. If you've signed a non-disclosure agreement (NDA), your hands might be tied when it comes to sharing certain information. Ultimately, studying ethics in technology is somewhat of a new conversation.

## **Conclusion**

Knowledge plays a crucial and vital role in societies and organizations of all types and sizes. It is linked to interactive systems that make development and updating a strategic task and goal for organizations, and it serves as the cornerstone of knowledge content for carrying out work, whether in input quality, processes, or outputs. This knowledge isn't born in isolation but rather arises from a vibrant, lived reality, a result of dynamic interactions among all elements of the organization, including its human, technological, and material aspects. It takes shape and emerges in a novel, improved form, according to human innovations, creativity, and perseverance, the driving force towards progress, advancement, and development becomes apparent. This confers a competitive edge to its possessor, a value of strength, dominance, and influence wielded by the knowledgeable over the ignorant.

Many ethical systems place fundamental ethical value on preserving nature and the natural world, protecting it. Advocates of posthumanism do not see any intrinsic value in defining what is natural and what is not, considering arguments for maintaining some imagined natural state of the human body as an unjustified obstacle to progress. Not all philosophers criticize the posthumanist tendency; for example, Nick Bostrom (2008), from the Future of Humanity Institute at the University of Oxford, argues that regardless of the feasibility debate, we should infer that there are forms of posthumanity worth exploring that could lead to extending life. In general, it would be a good thing for humans to transition to posthumanity if it's at all possible.

Therefore, today we cannot stand against scientific progress and technological advancement; those who do so will find themselves in a void, far removed from the humanity

of today. Civilization, which refuses to evolve, condemns itself to death, therefore, we must not fight against scientific and technological progress, not because we cannot do so, but because it is extremely necessary. Scientific and technological advancement is now indispensable, with many benefits leading to scientific breakthroughs on one hand and potentially advancing humanity further and further on the other hand.

Today, we are in dire need of activating the role of ethical philosophy in clarifying "what is at stake," especially regarding ethical problems related to information technology. This will enable us to use ethical theories in value systems, setting standards and controls. Hence, the study underscores the importance of ongoing efforts to establish independent bodies endowed with expertise, transparency, and efficacy, tasked with regulating the telecommunications sector; furthermore, expediting the liberalization of the telecommunications sector and encouraging more competition in subsectors is essential, given the significant impact of competition on enhancing the availability of various services at reasonable prices. Additionally, supporting the establishment of Internet Exchange Points (IXPs), both local and regional, in the Arab region.

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