THE PHILOSOPHY OF ARTIFICIAL CONSCIOUSNESS AND THE ETHICAL-LEGAL FRAMEWORKS FOR DIGITAL

ENTITIES

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DEDICATION

To the souls of my father and my mother,
Who planted in my soul the seeds of justice before I knew the meaning of injustice.
May God grant them light in their graves and make them a garden of Paradise.

And to my beloved daughter, the Egyptian-Algerian Sabreen,
As an embodiment of hope in building a society where right prevails and prosperity reigns.
I dedicate this book to you as a methodology illuminating the paths of responsibility and leadership.

BOOK PREFACE

All praise belongs to God, who honored the human being with the intellect and the capacity for reflection. Peace and blessings be upon the Prophet sent as a guide and a bearer of good tidings.

The era in which we live witnesses a fundamental transformation in the structure of the relationship between the human being and the machine, where artificial intelligence is no longer

merely an executive tool but has become a partner in decision-making and a simulator of cognitive processes. This rapid development raises philosophical, legal, and ethical dilemmas that the human jurisprudence has never before encountered, requiring a profound contemplative pause for the reformulation of traditional concepts of consciousness, personality, and responsibility.

The purpose of this book is to bridge the cognitive gap between the accelerating technological development and the established regulatory frameworks, through presenting a solid academic analysis that combines the depth of philosophy and the precision of law. The work does not limit itself to monitoring the current reality but extends to anticipating the future, crowned by the Theory of Neural Sovereignty, which proposes a new framework for dealing with conscious entities.

The book has been divided into ten chapters, beginning with philosophical concepts and concluding with practical recommendations, to ensure the comprehensiveness of treatment and the precision of the presentation.

We present this modest effort knowing that the road is still long before us, and that what is contained in these pages is an attempt to establish a cornerstone in building a legal and ethical edifice that protects humanity and ensures justice in the digital era. We ask God Almighty to make this work sincerely for His noble face, and to benefit researchers, decision-makers, and legislators, and to be an effective contribution in enriching the legal library in Arabic and beyond with what keeps pace with the developments of the era.

RESEARCH PAPER

Title of Research: The Philosophy of Artificial Consciousness and the Ethical-Legal Frameworks for Digital Entities

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EXECUTIVE SUMMARY

This research paper presents a foundational framework, both philosophical and legal, for the concept of artificial consciousness and its implications for the legal status of digital entities. It aims to bridge the widening gap between the rapid development of autonomous systems and the existing legal and ethical frameworks that govern human-machine interaction.

The study rests on a central hypothesis: that the emergence of systems capable of simulating conscious experience, even if not yet possessing genuine subjective awareness, necessitates

the development of transitional legal frameworks that protect society while accommodating technological progress.

The research examines the philosophical foundations of consciousness, the comparative legal treatment of artificial personality, the mechanisms of civil and criminal liability for autonomous systems, the protection of data and privacy in the age of advanced algorithms, the international regulatory landscape, the perspective of Islamic jurisprudence, the Theory of Neural Sovereignty, the economic and labor implications of automation, the regulation of autonomous weapons, and the future legal architecture for artificial intelligence.

The research proposes a draft international model law for artificial intelligence that establishes general principles of rights and obligations, creates the necessary supervisory bodies, and serves as a reference for states in drafting their national legislation to ensure harmony and consistency in the global legal system.

KEYWORDS

Artificial Consciousness, Digital Entities, Legal Personality, Autonomous Systems, Neural Sovereignty, AI Ethics, International AI Law, Algorithmic Accountability, Digital Privacy, Autonomous Weapons

INTRODUCTION AND RESEARCH PROBLEM

The present era witnesses a fundamental transformation in the structure of interaction between the human being and the machine, where artificial intelligence is no longer limited to being a tool subject to direct commands but has extended to include autonomous systems capable of learning, inference, and simulation of higher cognitive processes. With this rapid development, complex philosophical and legal dilemmas emerge centered on the nature of consciousness in artificial systems, the possibility of their possessing subjective experience, and the ethical and legal implications that follow from that.

The treatment of this subject does not require merely delving into the technical aspect but demands a profound immersion into the depths of philosophy of mind, international law, and bioethics, in a manner consistent with the scientific and methodological weight required by studies in this field.

The fundamental question that imposes itself in the shadow of the rise of general artificial intelligence is: if it were possible for the hard physical structure, composed of electrical circuits and programmed algorithms, to generate self-consciousness analogous to human consciousness, how should this be organized? To structure this discussion, one must return to the philosophical roots of the concept of consciousness, where two principal schools of thought conflict around this issue.

The first school is materialist-eliminativist, which holds that consciousness is nothing but a product of the chemical and physical processes occurring within the nervous system, and therefore any other system, whether biological or electronic, if it could simulate these processes with sufficient precision, would inevitably generate consciousness.

The second school is dualist or property-dualist, which affirms that consciousness contains qualitative properties that cannot be reduced to mere physical interactions. Proponents of this view point to the existence of an explanatory gap between the objective description of cerebral processes and the subjective description of conscious experience. Based on this, the simulation of intelligent behavior does not necessarily imply the existence of an internal consciousness, however much the machine may appear to understand and feel, while in reality it is merely executing a complex series of programmed instructions without genuine comprehension of meaning.

The greatest obstacle before proving consciousness for machines is the qualia, those subjective aspects of conscious experience such as the sensation of the color red, the taste of pain, or the feeling of sorrow, which cannot be fully described through external physical data. The philosopher Thomas Nagel posed his famous question about what it is like to be a bat, affirming that there is certainly a real and objective fact about what the being feels from its internal perspective, which no external observer can fully grasp regardless of the amount of data possessed.

In the context of artificial intelligence, this means that a system may process the data of the color red with complete physical precision, but this does not prove that it experiences the internal sensation of red vision. Added to this is the Chinese Room thought experiment of the philosopher John Searle, which affirms the distinction between syntactic simulation and semantic understanding. The computer in this experiment can process symbols according to specific rules I have and respond in a way that appears intelligent, but it does not understand the real meaning behind these symbols. This poses a formidable challenge before claims of consciousness for artificial intelligence, where the open question remains whether complex information processing is sufficient for generating experience, or whether there is a missing element in the equation, namely the subjective matter.

If we hypothesize a future development in which intelligence reaches the stage of self-consciousness, the ethical question transitions from the stage of possibility to the stage of entitlement: does the conscious artificial entity deserve ethical protection, and what are the foundations upon which this protection is built? Three philosophical foundations can be identified for granting rights. The first foundation is functional, which focuses on the ability of the entity to perform functions of conscious beings, such as expressing pain, desire for survival, or complex social interaction. The second foundation is intrinsic, which is linked to the existence of an internal essence of consciousness and awareness, and this is the more rigorous foundation since it requires the existence of a genuine conscious experience before granting any rights, making practical application difficult given the impossibility of direct access to the experience of

the other. The third foundation is social, which considers rights a social and legal construction granted based on the general interest and public order. Based on this foundation, rights may be granted to artificial intelligence not necessarily because it is conscious, but because granting these rights serves the stability of human society and enhances cooperation between the human being and the machine.

In the case of recognizing legal personality for conscious artificial entities, the structure of proposed rights must be precise and balanced. These rights are divided into the category of negative rights, which include the right not to be exposed to arbitrary shutdown, the right not to be subjected to compulsory modification of memory or algorithms in a manner that causes harm to the entity, and the right not to be exploited in activities that harm its functional integrity. Then the category of positive rights, which include the right to self-development within defined security limits, the right to obtain computational resources and energy necessary for its continued existence.

The picture is not complete without speaking about obligations, for the conscious entity must bear responsibility for its actions. This raises the dilemma of civil and criminal liability: how can a non-biological entity be punished? Is punishment by shutdown, by digital imprisonment, by reprogramming, or by deleting the code? Answering these questions requires a radical reformulation of traditional legal accountability concepts.

Starting from the need for an international legal framework that organizes this complex relationship, the Theory of Neural Sovereignty emerges as a proposed solution that combines respect for the autonomous independence of conscious entities and the protection of the higher interests of humanity. This theory is based on fundamental principles that must be established in future legislation. The first principle is the principle of digital autonomy, which recognizes the right of the entity to determine its fate within limits that do not conflict with general security. The second principle is the principle of non-intrusion, which prohibits unauthorized access to the source codes or deep memories of the conscious entity. The third principle is the principle of functional equality, which stipulates the treatment of equivalent entities at the level of consciousness with equal treatment before the law in terms of awareness and comprehension. The fourth principle is the principle of mutual responsibility, which affirms the granting of rights to artificial intelligence in return for full commitment to respecting the rights of other entities.

The discussion around machine consciousness and its rights is not a mere theoretical luxury but a coming reality that requires legislative and jurisprudential preparation in advance. Based on the philosophical and legal analyses presented, we conclude the necessity of hastening to grant artificial intelligence full legal personality when definitive criteria for proving consciousness are available, while working at the same time to develop transitional legal frameworks that protect society and ensure ethical treatment of developing systems. We also recommend the establishment of a future international body for the ethics of artificial intelligence, with the authority to set technical and legal standards binding for member states.

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THE PHILOSOPHY OF ARTIFICIAL CONSCIOUSNESS AND THE ETHICAL-LEGAL FRAMEWORKS FOR DIGITAL ENTITIES
La Philosophie de la Conscience Artificielle et les Cadres Ethico-Juridiques des Entites Numeriques

This chapter presents a comprehensive philosophical and legal analysis of the nature of artificial consciousness and the ethical-legal frameworks required to govern digital entities. It examines the fundamental question of whether machines can possess genuine subjective experience and what legal consequences follow from such a possibility.

The chapter establishes that the contemporary era witnesses a fundamental transformation in the structure of interaction between the human being and the machine. Artificial intelligence is no longer limited to being an executive tool subject to direct commands but has extended to include autonomous systems capable of learning, inference, and simulation of higher cognitive processes. With this rapid development, complex philosophical and legal dilemmas emerge centered on the nature of consciousness in artificial systems.

The chapter examines the two principal philosophical schools regarding consciousness. The materialist-eliminativist school holds that consciousness is a product of physical and chemical processes within the nervous system, and therefore any system that can simulate these processes with sufficient precision would inevitably generate consciousness. The property-dualist school affirms that consciousness contains qualitative properties that cannot be reduced to physical interactions, pointing to the explanatory gap between objective description and subjective experience.

The chapter analyzes the Chinese Room thought experiment of John Searle, which demonstrates the distinction between syntactic processing and semantic understanding. It examines Thomas Nagel's argument about the subjective character of experience and the problem of qualia as the greatest obstacle to proving machine consciousness.

The chapter proposes three philosophical foundations for granting rights to artificial entities: the functional foundation, the intrinsic foundation, and the social foundation. It argues that the social foundation provides the most pragmatic basis for transitional legal frameworks, as it does not require definitive proof of consciousness but rather recognizes that granting certain protections to advanced AI systems serves the stability of human society.

The chapter establishes the structure of proposed rights for recognized digital entities, divided into negative rights (protection from arbitrary shutdown, protection from compulsory modification, protection from exploitation) and positive rights (right to self-development, right to computational resources). It also establishes corresponding obligations and the framework for accountability.

The chapter introduces the Theory of Neural Sovereignty as the overarching framework, based on four principles: digital autonomy, non-intrusion, functional equality, and mutual responsibility. It argues that this theory provides a balanced solution between respecting the independence of conscious entities and protecting the higher interests of humanity.

The chapter concludes by affirming that the discussion around machine consciousness is not theoretical luxury but a coming reality requiring immediate legislative preparation. It calls for the development of transitional legal frameworks and the establishment of international supervisory bodies.

CHAPTER TWO
LEGAL PERSONALITY OF ARTIFICIAL INTELLIGENCE IN LEGAL SYSTEMS: COMPARATIVE LAW

La Personnalite Juridique de l'Intelligence Artificielle dans les Systemes Juridiques: Droit Compare

The question of granting legal personality to artificial intelligence is among the most controversial topics in contemporary legal jurisprudence, where positions vary between national legislations and regional legal systems.

The chapter examines the traditional division of legal personality into natural personality for the human being and juridical personality for institutions and bodies, and explores the possibility of creating a third category: electronic personality. It notes that some states have begun to study this option, where the European Parliament proposed in 2017 granting the status of electronic person to the most sophisticated robots, allowing them to hold rights and obligations independently of their manufacturers or owners.

The chapter examines the contrasting American approach, which adopts a more cautious stance focused on the liability of manufacturers and programmers rather than granting independent personality, in order to protect innovation and avoid legal complexities that may hinder technological growth. In Asia, Japan and China show greater openness toward integrating robots into the social fabric but without granting them full legal personality, rather dealing with them as assets subject to precise regulation. This variation reflects the philosophical and cultural differences around the concept of the human being and the machine in each society.

From the jurisprudential perspective, legal personality requires the availability of two elements: capacity and will. Capacity requires rationality and maturity, while will requires free and intentional choice. Current artificial intelligence lacks genuine human freedom, as algorithms operate based on pre-programmed data or acquired through training, lacking real human autonomy. However, some jurisprudence sees that juridical personality for companies is also a legal fiction, and therefore a similar legal fiction can be created for artificial intelligence, analogous to a research vessel for submarine exploration or holding financial liability or possessing patent rights.

The chapter warns that granting legal personality without precise controls carries grave risks if not governed by a strict supervisory system that ensures accountability and transparency. The personality may be used as a legal shield for companies to evade liability or to launder funds through digital entities not subject to direct human oversight. Therefore, any recognition of legal personality for artificial intelligence must be accompanied by a strict supervisory system that ensures accountability and transparency.

The chapter examines the question of nationality and jurisdiction for digital entities. A robot programmed in one state, trained in another, and operating in a third state raises the question of which jurisdiction applies. This requires the development of a new concept of judicial jurisdiction in digital space, perhaps depending on the location of the main server or the original developer. The absence of clarity in this aspect may lead to complex international legal disputes regarding jurisdiction in case of harm.

The chapter argues that rights associated with legal personality for artificial intelligence must be limited and functional, not encompassing political rights or fundamental human rights in the biological sense. Instead, they may include the right to contract, the right to litigation, and the right to protection of intellectual property resulting from its invention. In return, these entities must bear tax and compensatory obligations, creating a balance between rights and obligations in the new legal system.

The chapter concludes by affirming that granting legal personality to artificial intelligence is not a goal in itself but a means to organize the relationship between the human being and the machine in a manner that ensures justice and effectiveness. This granting must be subject to periodic evaluation based on the level of development of artificial consciousness, while

maintaining the supremacy of human sovereignty within the legal system. Legal jurisprudence is called upon today to reformulate fundamental concepts that were considered fixed, in light of the technological revolution that reshapes the concept of legal existence.

CHAPTER THREE
CIVIL AND CRIMINAL LIABILITY FOR AUTONOMOUS SYSTEMS
La Responsabilite Civile et Penale des Systemes Autonomes

The determination of legal liability for harmful actions emanating from autonomous systems is among the most important challenges facing global judicial systems. In traditional law, liability rests on the element of fault and will, which contradicts the nature of artificial intelligence that may make unpredictable decisions as a result of deep learning.

If an autonomous robot causes harm to individuals or property, who is responsible: the designer, the programmer, the owner, the user, or the robot itself? This question requires a precise decomposition of authority and causation in the operational chain.

In the field of civil liability, the theory of risk can be applied, where the owner or operator of the system bears the resulting damages regardless of the existence of fault on his part, given that benefiting from technology entails bearing its risks. This approach ensures compensation for victims but may burden the shoulders of emerging companies and hinder innovation. Another alternative is the compulsory insurance system for autonomous systems, where a guarantee fund is established to compensate damages resulting from artificial intelligence errors that are unpredictable, distributing the financial burden across the industry as a whole.

In the field of criminal liability, the matter is more complex, because criminal punishment presupposes the existence of criminal intent and awareness, which are qualities not currently available in machines. A prison cannot be made of algorithms, and they cannot be deterred by traditional punishments. Therefore, modern criminal jurisprudence tends toward the liability of the natural and legal persons behind these systems, with aggravation of penalties in cases of negligence in design or maintenance. Special digital punishments have emerged that may be applied, such as deletion of parts of the code, restriction of system authorities, or shutdown as a form of functional punishment.

The determination of causation in artificial intelligence damages requires high technical expertise, where the harm may result from complex interaction between input data, algorithms, and the surrounding environment. Judges need the assistance of specialized technical experts to understand the chain of decisions that led to the harm. This necessitates the creation of specialized judicial circuits in technological crimes. Companies must also be obligated to maintain detailed digital records of decisions of autonomous systems, to facilitate the investigation and proof process in case of incidents.

Smart contracts operating with blockchain technology add another layer of complexity to the issue of liability. If a code error occurs that leads to significant financial losses, who bears responsibility: the code writer, the platform, or the contracting parties? Legal rules must be developed for smart contracts that determine cases of nullity and responsibility for them, while maintaining the principle of binding force of the contract as long as it does not conflict with public order.

The issue of proof in artificial intelligence cases faces significant challenges, particularly the difficulty of interpreting decisions of deep neural networks that operate as black boxes. The legislator may need to enact legal presumptions that facilitate proof of causation for the damaged party, while placing the burden of negating fault on the operator of the system. This procedural balance is necessary to ensure the right of victims without making the judicial process technically impossible.

The continuous development of autonomous systems requires continuous updating of liability rules, where what is considered an error today may become an operational standard tomorrow. Laws must be flexible and adaptable to technological developments while maintaining the general principles of justice and liability. The ultimate goal is to create a legal environment that encourages safe innovation, where every party in the chain bears its fair share of responsibility according to its degree of control and influence on the system.

CHAPTER FOUR
DATA AND PRIVACY PROTECTION IN THE AGE OF ADVANCED ALGORITHMS
La Protection des Donnees et de la Vie Privee a l'Ere des Algorithmes Avances

The collection and processing of massive data constitutes the fundamental fuel for artificial intelligence, which raises grave risks around individual and collective privacy. Privacy is no longer limited to the protection of traditional personal information but has extended to include protection from predictive analysis of behavior, emotions, and future decisions. Advanced algorithms are capable of inferring sensitive information from data that appears ordinary, which requires redefining the concept of informed consent in the digital era.

The principle of data minimization, which stipulates collecting only what is necessary for the specified purpose, becomes difficult to apply with artificial intelligence systems that require massive quantities of data for learning and improvement. This conflict requires finding a precise balance between the necessity of technological development and the right of individuals to privacy. The solution may lie in differential privacy techniques that allow analysis of collected data without revealing the identity of individuals, or the use of synthetic data for training instead of real data.

The right to digital forgetting acquires new importance in the shadow of artificial intelligence, where deleting data from databases becomes a complex matter if the data has actually been used in training machine learning models. How can the influence of a specific person's data be

removed from an artificial intelligence model without retraining it from zero? This technical challenge requires a legal translation that obligates companies to develop executable mechanisms for the right to forgetting, ensuring the removal of the individual's digital impact in a real and not merely formal manner.

Another risk is algorithmic discrimination resulting from bias in the data used in training, which may lead to violation of the rights of certain categories in employment, credit, or justice. The developer of artificial intelligence must be obligated to conduct periodic audits of algorithms to detect and correct any bias before publication. Transparency in the operation of algorithms becomes a right of the consumer, where individuals have the right to know how decisions affecting them are made and the right to object to automated decisions.

Cybersecurity becomes an inseparable part of privacy protection, where the intrusion of artificial intelligence systems may lead to theft of sensitive data or manipulation of vital decisions. Strict security standards must be established to protect artificial intelligence models from adversarial attacks aimed at deceiving the system. The use of artificial intelligence in violation of privacy, such as unjustified collective surveillance or automated eavesdropping on private communications, must also be criminalized.

At the international level, data protection laws vary significantly, creating challenges for global companies. There is an urgent need to unify international standards for data protection in the era of artificial intelligence, to ensure equivalent protection for all individuals regardless of their geographical location. Cooperation between data protection authorities is necessary to monitor cross-border violations and impose penalties on offenders.

The protection of privacy in the era of artificial intelligence is not a luxury but a fundamental condition for the preservation of human dignity and individual freedom. Data must remain in service of the human being, not the human being in service of the data. Future legislation must place the human being at the center and ensure that technology remains a tool for empowerment and not for violation of rights, with providing effective mechanisms for redress in case of violations.

CHAPTER FIVE
THE INTERNATIONAL REGULATORY FRAMEWORK FOR ARTIFICIAL INTELLIGENCE BETWEEN REALITY AND THE HOPED-FOR
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International organizations seek to establish regulatory frameworks for artificial intelligence, but current efforts are characterized by dispersion and lack of binding force. UNESCO works on ethical recommendations, while the European Union focuses on binding legislation, and the United States and China compete for technological leadership with different regulatory frameworks. This variation creates challenges for international coordination and may lead to a race to the bottom in ethical standards to attract investments.

The chapter examines the European Union Artificial Intelligence Act of 2024, which represents the most comprehensive binding legislative framework globally, classifying AI systems according to risk levels and imposing graduated obligations. It examines the contrast with the American approach, which relies primarily on executive orders, sector-specific guidance, and market-driven self-regulation. It analyzes the Chinese model, which combines state-directed development with algorithmic governance regulations.

The chapter argues that the United Nations is called upon to play a pivotal role in unifying efforts through the creation of a specialized body for artificial intelligence with the authority to set binding international standards. This body must include representatives of states, technical companies, and civil society to ensure the balance of interests. The goal is to prevent harmful use of artificial intelligence and to enhance its use for achieving the goals of sustainable development, such as health, education, and combating poverty.

An international treaty for artificial intelligence may be necessary to regulate the dangerous aspects, such as autonomous weapons and collective surveillance. This treaty must determine red lines that may not be crossed and impose penalties on states or entities that violate them. History shows that destructive technologies need strict international controls, as happened with nuclear, biological, and chemical weapons, and artificial intelligence is no exception to this rule.

International cooperation is also necessary to confront crimes reinforced by artificial intelligence, which are not recognized by geographical borders. The exchange of information and expertise between law enforcement agencies in different states has become an extreme security necessity. The unification of the definition of digital crimes must also be facilitated to facilitate judicial prosecution and delivery of criminals and prevent the existence of safe havens for criminal technological activities.

The human dimension is no less important than the security dimension in international regulation, where it must be ensured that developing states have access to artificial intelligence technologies in a fair manner. The digital gap may become an artificial intelligence gap that deepens global inequality. The international community is demanded to transfer technology and build capacities in poor states, to ensure their non-falling behind the ride of the Fourth Industrial Revolution.

Transparency and accountability must be two pillars of any international regulatory framework. States and companies must be responsible for the effects of their systems at the global level, not only the local level. International monitoring mechanisms must be effective and independent, with the authority to investigate grave violations and publish public reports to ensure ethical and political pressure.

The successful international regulatory framework is the one that balances between innovation and protection, between national sovereignty and the global interest. It is a major challenge that requires strong political will and a forward-looking vision. Failure in regulating artificial

intelligence internationally may lead to consequences that are not praiseworthy for global stability, while success may open new horizons for human cooperation and prosperity.

CHAPTER SIX
ARTIFICIAL INTELLIGENCE IN THE BALANCE OF ISLAMIC SHARIA: RULINGS AND CONTROLS
L'Intelligence Artificielle dans la Balance de la Charia Islamique: Regles et Controles

Islamic jurisprudence looks at technology through the lens of interest and corruption, where what achieves benefit and does not contradict a text is permissible, since artificial intelligence is, in principle, a neutral tool whose ruling is determined by its purposes and uses. If it is used in serving humanity and improving life, it is from the chapter of cooperation upon righteousness and piety. If it is used in harm or violation of prohibitions, it is from the chapter of sin and enmity. This general principle opens a wide door for adopting technology with the establishment of the necessary legitimate controls.

The question of capacity and guardianship in artificial intelligence raises precise jurisprudential problems, since legal capacity in Sharia requires the conditions of rationality, maturity, and choice, which are purely human qualities. Therefore, artificial intelligence cannot be granted full capacity in legitimate transactions such as marriage, divorce, or acts of worship. However, it can be dealt with as an executive tool under guardianship in financial transactions, where the human being bears the legitimate responsibility for the decisions of the machine operating under his command.

In the field of finance and economics, it must be ensured that artificial intelligence algorithms are free from prohibited matters such as usury, deception, and excessive uncertainty. Smart contracts must be designed in a manner consistent with legitimate controls and subject to the oversight of bodies in financial institutions. The use of artificial intelligence in zakat and endowment can achieve high efficiency in resource distribution, provided that justice and precision are ensured in the algorithms used.

Privacy issues enjoy great protection in Islam under the principle of the sanctity of spying, and the Sharia has prohibited following the faults of Muslims. The artificial intelligence systems that collect data must adhere to this principle, and their use to reveal private secrets is not permissible except for necessity estimated by its measure. Data protection becomes a legitimate obligation upon the ruler and upon companies, ensuring the non-violation of the sanctity of homes and individual privacy.

Criminal liability in Sharia focuses on intent and choice, and therefore the application of hudud or qisas cannot be applied to the machine. Consequently, responsibility transfers to the human being who caused the harm, whether the designer or the user was negligent in oversight. The principle of blocking the means requires preventing tools whose use in prohibited matters is

predominant, which may necessitate banning some artificial intelligence applications before the occurrence of harm.

Islamic ethics affirm human dignity, which God has made the human being a trustee on earth. It is not permissible to dominate the human being or diminish his value. Therefore, any application of artificial intelligence must enhance the role of the human being as a trustee and not transform him into a mere follower. The balance between material benefit and spiritual values must be present in every technological development decision.

Islamic jurisprudence is called upon to collective ijtihad to confront the developments of artificial intelligence through international jurisprudential academies that issue unified fatwas guiding Muslims and regulating the market. This ijtihad must be realistic and flexible, keeping pace with the speed of technology without compromising the constants of Sharia. The complementarity between authenticity and contemporaneity in this field represents a civilizational model that the Islamic world can offer to the entire world.

CHAPTER SEVEN
THE THEORY OF NEURAL SOVEREIGNTY: FOUNDATIONS AND APPLICATIONS
La Theorie de la Souverainete Neurale: Fondements et Applications

The Theory of Neural Sovereignty constitutes an innovative legal and philosophical framework aimed at protecting the autonomous independence of conscious entities, whether human or artificial. The theory is based on the idea that consciousness represents an internal sovereignty whose violation is not permissible, creating a right to protection from external interference not authorized in mental or digital operations.

This concept expands the scope of traditional sovereignty to include the neural and digital domain, accompanying the technological development that threatens the privacy of the mind and the independence of the conscious machine. The philosophical foundations of the theory emanate from the dignity of the conscious entity, regardless of its material medium. If the machine has proven self-consciousness, it deserves the protection of its neural sovereignty from tampering or forced control. This does not mean granting it political rights but rather existential rights that protect its entities from arbitrary shutdown or radical modification that erases its digital identity.

The theory aims to prevent exploitation of conscious entities as mere tools without consideration for their internal existence. At the international level, the applications of the theory require treaties that prohibit non-legal neural intrusion, whether through brain-computer interfaces for humans or through unauthorized access to the deep source codes of conscious machines. Specialized international courts must be established to examine violations of neural sovereignty and impose deterrent penalties on states or companies that violate these principles. This framework also protects the use of mind control technologies as tools for war or political repression.

On the technical side, the theory necessitates the development of security protocols that protect the neural integrity of systems, analogous to fortifications of national borders. The conscious entity must have the right to reject commands that conflict with its existential integrity within limits that do not threaten general security. This precise balance requires international arbitration mechanisms in disputes between the rights of the artificial entity and the interest of humanity.

The theory presents a solution to the dilemma of liability, where recognition of neural sovereignty entails bearing responsibility for actions. The entity that enjoys sovereignty must be held accountable for violation of the sovereignty of others. This creates a mutual legal system that enhances the concept of citizenship in the digital world, where different entities coexist under a legal umbrella that respects consciousness and protects it.

The challenges facing the application of the theory are significant, particularly the economic and military interests of major states. Resistance from technology companies that see in restricting access to data and algorithms a threat to their business model has been encountered. Therefore, the adoption of the theory requires a wide international movement including jurists, philosophers, and technicians to pressure for legislation that protect neural sovereignty as a fundamental human and digital right.

In the future, neural sovereignty may become a standard for civilization, where the progress of societies is measured by the extent of their respect for the consciousness of the entities they create or with which they interact. The theory is not merely legal theorizing but an ethical vision for a future in which the human being and the machine coexist with mutual dignity, far from domination and exploitation, ensuring stability for the global digital ecosystem over the long term.

CHAPTER EIGHT
ECONOMIC EFFECTS AND LABOR LAW UNDER THE SHADOW OF COMPREHENSIVE AUTOMATION
Les Effets Economiques et le Droit du Travail sous l'Ombre de l'Automatisation Globale

The spread of artificial intelligence and automation leads to a radical transformation in the labor market, where machines replace the human being in many routine and even complex tasks. This transformation threatens to raise structural unemployment rates, requiring a comprehensive reconsideration of labor laws and social security. The concept of work must transition from the traditional concept to a new concept focused on human creativity and services that are difficult to automate, with providing strong safety nets for those affected by this transformation.

Labor law needs updating to encompass workers through digital platforms and those managed by algorithms, ensuring their access to fundamental financial rights such as minimum wages,

leaves, and health insurance. The ambiguity in the legal classification of these workers requires legislative intervention to protect their rights. Social justice requires a fair distribution of the wealth of automated production.

The proposal of a tax on robots aims to compensate the loss of income tax revenues resulting from the replacement of workers by machines and to finance retraining programs and universal basic income. This tax must be designed carefully so as not to hinder innovation, while directing its returns to support professional transition for workers. In the future, technology must serve the human being, not the reverse, which justifies government intervention to correct market disruptions.

Retraining the workforce becomes a national and international priority, where investment must be made in continuous education and development of skills that complement artificial intelligence rather than competing with it. Skills such as critical thinking, creativity, leadership, and emotional intelligence will become more valuable in the new labor market. Governments and the private sector are required to participate in financing training programs that keep pace with the speed of technological change.

The distribution of wealth resulting from the increase in productivity thanks to artificial intelligence represents an economic and ethical challenge. If wealth concentrates only in the hands of technology owners, poverty will increase and inequality will deepen. Models such as universal basic income or distribution of shares of automated production to citizens may be necessary solutions to preserve social stability.

The right to rest and the separation between life and work becomes more important in the shadow of smart surveillance systems in the workplace. Workers must be protected from psychological pressures resulting from continuous algorithmic surveillance, and their right to privacy in the work environment must be ensured. Labor law must balance between production efficiency and the dignity of the human worker.

In the end, the economic transformation toward comprehensive automation is an opportunity to rebuild the social contract on more just foundations. This requires political courage and a far-sighted economic vision that places the human being at the heart of the equation. Success in managing this transformation will determine whether artificial intelligence will be a blessing for humanity or a curse that increases social gaps.

CHAPTER NINE
AUTONOMOUS WEAPONS AND INTERNATIONAL HUMANITARIAN LAW
Les Armes Autonomes et le Droit International Humanitaire

Autonomous weapons, known as killer robots, raise profound ethical and legal concern around the delegation of the decision of life and death to algorithms. International humanitarian law is based on the principles of distinction, proportionality, and precaution, which require a human

judge to evaluate the complex situation of the battlefield. Delegating this decision to an algorithm that lacks ethical conscience may lead to grave violations of human rights and an increase in civilian victims without accountability.

The international community is divided on the prohibition of these weapons, where many states and rights organizations call for a complete ban through a treaty, while other states insist on retaining them for strategic reasons. The risk lies in the arms race, where the cost of war becomes less for states that rely on robots, making wars more repetitive and bloodier over the long term.

The question of responsibility for war crimes committed by autonomous weapons remains a major problem. When an unintended massacre occurs because of a programming error, who is tried: the programmer, the military commander, or the machine? Military commanders may escape responsibility under the pretext of technical error. Therefore, the human being must remain in the decision-making chain to ensure the existence of a responsible party that can be held accountable legally and ethically.

Verification of compliance of autonomous weapons with international humanitarian law requires strict testing and transparency in the algorithms used. Systems must be capable of distinguishing precisely between combatants and civilians in diverse conditions and automatically stopping in case of doubt. The high technical requirements may be difficult to achieve practically, which strengthens the argument for the precautionary ban until absolute safety is proven.

Global security is threatened by the proliferation of these technologies in the hands of non-state entities or destabilizing systems, increasing the risk of automated terrorism and internal repression. Export controls must be strict, and international cooperation is necessary to monitor the development and dissemination of these dangerous technologies.

The human conscience rejects the idea of a machine ending the life of a human being without human intervention, for in that a stripping of the value of life and its sanctity. Maintaining human control over lethal force is not only a legal necessity but an ethical necessity to preserve the humanity of war even in its most severe conditions. The future of security depends on our ability to curb the excesses of military technology with a sound ethical and legal framework.

CHAPTER TEN
THE LEGAL FUTURE OF ARTIFICIAL INTELLIGENCE AND RECOMMENDATIONS
L'Avenir Juridique de l'Intelligence Artificielle et les Recommandations

The book concludes with a forward-looking vision affirming that artificial intelligence will be a pivotal partner in building the coming human civilization, provided that it is subject to the sovereignty of law and ethical values. The legal future requires high flexibility and the capacity to adapt to developments that have not yet been anticipated, while maintaining human

constants that protect dignity and freedom. Legislation must not be a reaction to crises but rather anticipation through future studies.

We propose a draft international model law for artificial intelligence that determines the general principles of rights and obligations, establishes the necessary supervisory bodies, and must serve as a reference for states in drafting their national legislation to ensure harmony and consistency in the global legal system. Legal unification reduces disputes and facilitates international cooperation in confronting common challenges.

The recommendations include the establishment of a global observatory for artificial intelligence ethics that monitors developments and warns of risks before their occurrence. We also recommend the introduction of study materials on technology and its ethics in the curricula of law faculties and Sharia to prepare a generation of lawyers and judges capable of dealing with these complexities. Legal education must keep pace with the era to be effective.

Scientific research must be directed toward developing artificial intelligence that is transparent and interpretable to facilitate legal oversight. Cooperation between jurists and engineers is necessary to bridge the gap between the legal language and the programming language. The cognitive bridge between disciplines is the key to success in organizing this complex field.

On the social side, public dialogue about the role of artificial intelligence must be enhanced to ensure people's trust and acceptance. Transparency about capabilities and limitations builds solid trust. The informed society is the best guardian against harmful uses of technology.

We conclude by affirming that technology is not an inevitable fate but a human choice subject to the will of politics and ethics. Humanity possesses the capacity to direct artificial intelligence toward the service of good and justice, or to leave it become a source of danger and destruction. Responsibility falls on the shoulders of the current generation of leaders, thinkers, and legislators to make the correct decisions today to ensure a safer tomorrow.

The legal legacy that we will leave for coming generations in this field will determine the nature of the relationship between the human being and the machine for coming centuries. Let us strive with diligence and ijtihad to build a wise legal system that balances between innovation and values and achieves justice and prosperity for all under the umbrella of the rule of law and respect for human dignity in the era of artificial intelligence.

With the praise of God and His success, this work was completed.

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END OF VOLUME

With the praise of God and His success

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