

From Instrumental Reason to Artificial Intelligence: Rationalization as a Tool for Domination

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Abstract:

This research paper attempts to examine instrumental reason and artificial intelligence as tools for controlling humans and nature, so that humans become masters and owners of nature. The features of this control over humans and nature increased with the dawn of the Enlightenment philosophy in Europe, through general values represented by reason as a thought based on rational knowledge, critical questioning as scrutiny and explanation, freedom as maturity without guardianship and independence without dependency, and development as a continuous process of growth and prosperity. However, the values of the Enlightenment, and then modernity, were turned into the opposite, as rationality turned into more tyranny after the discovery of artificial intelligence software. Freedom has been transformed into more restrictions, control, and oppression. Development has become a form of technological rationalization (intelligent technology), manifested in the exploitation of artificial intelligence by media and economic institutions to impose a culture of social control. This is achieved by subjecting individuals to mechanisms of control, surveillance, and repression. Consequently, under the artificial intelligence system -a more advanced form of instrumental rationality- modern humans have been transformed into robots, confined within the framework of pervasive materialism and destructive individualism. Capitalist and economic institutions control their behavior within society and within the institutional framework.

Keywords: Instrumental rationality, artificial intelligence, rationalization, social control, technology.

Introduction:

There is no doubt that contemporary human beings have come — to one extent or another — to live within the transformations produced by the model of modernity at the level of thought and behavior, following humanity's negation of the sacred through the disenchantment of the world. Consequently, scientific knowledge has been adopted as an alternative to mythical and superstitious thinking. Therefore, it can be said that modernity is a condition that expresses modern societies, which differ radically from classical societies. Indeed, for some, modernity represents the ultimate model of human progress across various levels such as politics, science,

social organization, and even human behavior, culminating in the emergence of the model of artificial intelligence.

For this reason, some regard modernity as the highest achievement attained by Western humanity. However, modernity failed to fulfill the promises it made and the hopes it inspired; rather, those slogans turned into their very opposites. This is precisely what led many thinkers to approach modernity through criticism and evaluation. Modernity has thus been described as “liquid,” in the sense that it gives rise to a crisis affecting society and the life of contemporary individuals. Moreover, it has reduced human beings to mere obsessive consumers and victims of systems of organization, control, and surveillance. Many philosophers diagnose the state of crisis to which modernity has led by examining human life within the framework of instrumental reason. They question the transformations that have affected human life, everyday existence, and the social space as a system that shapes and organizes the lives of individuals.

For this reason, Enlightenment in the modern era is considered a worldview founded upon reason, which had long been held captive by the authority of Aristotle and the teachings of the Church. This vision began to take shape in the seventeenth century with the philosophers of reason, who established the horizon of the Enlightenment and the foundations of Western modernity through their various emancipatory ideas. Enlightenment, above all, is a movement of ideas grounded in reason, nature, right, truth, morality, freedom, and progress. It represents the formation of a civilization based on reason, social relations, and material forces. It is the essence of the Western civilizational and cultural project that proclaimed the liberation of human beings from their passive condition, the disenchantment of the world, and the destruction of myths through rationalism and empiricism, which constituted the intellectual genes of both Descartes and Locke. The Enlightenment also carried the ideas of autonomy and the human purposiveness of our universal actions.

Perhaps the first constitutive feature of Enlightenment philosophy lies in making us prefer what we choose and decide for ourselves, rather than what is imposed upon us by an authority external to our will, and in rejecting submission to commandments forced upon humanity outside its own volition. Within the framework of this subject, we must dare to question the transformations that have appeared at the level of modernity itself. What constitutes the everyday crisis and the disturbances of life produced by instrumental rationality? What is meant by instrumental rationality, and what are its consequences for both the individual and society? In order to answer these questions, we adopted the historical method to trace the evolution of terms and the meanings of concepts, as well as the analytical method to present the subject through problematization and argumentation, in addition to other approaches required by the nature of the research study.

The study ultimately concludes by affirming that instrumental rationality has shaped the modern worldview since the dawn of modern thought, and that it constitutes one of the most important intellectual systems that formed the vision of the modern epistemological order, including the Enlightenment era (Enlightenment / Lumière), considered as a conception carrying a set of values that framed the modern period and shaped its perspectives. We then addressed modernity as a conception of the world, focusing on its underlying values such as rationality and rationalization, which, under Western modernity, turned against the aspirations

and hopes proclaimed by Enlightenment philosophy. Rationality thus became the opposite of what it had promised, imposing increasing forms of domination, restriction, and submission to systems of surveillance, authority, visual control, and regulation. In this way, rationality produced what Marcuse called the “one-dimensional man” — the materialistic individual who has become a victim of commercial and economic corporations that impose a culture of obsessive consumerism.

1. Instrumental Rationality: From the Disenchantment of the Sacred to the Logic of Domination

Rationality has long represented one of the essential correlates of Western modernity, serving as a clear expression of modernity as a set of values and an intellectual system that constitutes the civilization of the modern West. It seeks to formulate a worldview founded upon reason as freedom without guardianship, criticism as courage without dependency, and progress as a civilizational process of becoming.

The coherence existing between modernity and rationality compels us to examine the emergence of the latter and, consequently, to discuss its dimensions and outcomes within the horizon of modernity. Rationality, as a worldview, traces its first foundations back to the attempts of René Descartes, who worked to establish the subject (“Le sujet”) in opposition to the object (“l’objet”), creating a sharp duality between the knowing subject, represented by the human being on the one hand, and the object of study, represented by nature on the other. This stood in both form and content in opposition to the previously dominant mythical and theological modes of thought. **(Boumnir, 2010, p. 23)**

Thus, rationality manifests itself through its repeated attempts to dominate nature by disenchanting the world and stripping the universe of its sacredness, thereby relying upon rational knowledge. The features of this domination began to emerge with Descartes through rationalism, by placing the human subject **(Boumnir, 2010, p. 23)** conscious of its own power **(Boumnir, 2010, p. 25)** in confrontation with the external world, which became subject to conquest and control. For this reason, Descartes begins from the cogito (“Le Cogito”), founded upon the idea: “I think, therefore I am,” as a declaration that the self is the foundation and source of knowledge. **(Ibrahim, n.d, p. 15)**

The idea of dominating nature through rationality, as one of the constants of Western modernity, was also manifested in the thought of Francis Bacon. Descartes’ philosophy was not the sole influence guiding the notion of control over nature. Although Bacon and Descartes differed in their philosophical orientations and in their conceptions of the origin of knowledge, they shared and agreed upon the necessity for humanity to seek knowledge of nature through the discovery of its laws, and then to employ and direct this knowledge toward achieving and imposing mastery over nature and controlling it, with a greater emphasis on serving human beings. **(Michel Foucault, 1990, p. 35)**

Hence, rationality emerges as a worldview founded upon the domination of nature and its various laws. The first foundations of this domination appear in the philosophy of René Descartes, which aimed to make the human subject the criterion of knowledge, as well as in the philosophy of Bacon through its orientation toward nature by means of fixed and objective

laws. This constituted an explicit call to dominate nature through the experimental method, which approached nature with the aim of regulation and control. However, this domination was not directed solely toward nature, but also extended to human beings and society as a whole. Indeed, the idea of domination shifted from nature to the human being and society. This conception places individuals within the modern state under systems of control and oppression, particularly through politics as a form of domination, especially after the philosophy of Niccolò Machiavelli, which was founded upon authority and control. Human nature, according to this perspective, is inherently shaped by the desire for possession and domination, to the extent that the logic of control became a natural instinct within the human psyche. **(Bournir & Kamel, 2010, p. 30)**

In this sense, politics became scientifically grounded upon the legitimacy of domination while discarding ethical foundations and religious principles. This is the model that emerged within industrially advanced societies,. **(Hallaq, 2014, p. 155)** founded upon instrumental rationality (“instrumental Rationalism”), whereby politics became closely linked to rationality in a manner that transformed the modern state into an authoritarian and totalitarian entity actively engaged in controlling both humanity and the world. **(Touraine & Alain, 1998, p. 155)**

This was the path followed by Enlightenment philosophy and modernity in their attempt to dominate nature and institutionalize the concept of “natural resources,” a concept deeply embedded in the social and industrial structure of modernity as well as in institutions of governance and repression. It reflects the logic of the modern state and its sovereign will as an inseparable component of a worldview grounded in domination as an intellectual structure.

It thus becomes evident that rationality, under modernity, transformed into a worldview actively engaged in its continuous attempt to regulate nature and control the order of the universe, placing humanity as the master of nature. This vision was reinforced by the modern state through policies of domination over institutions by means of controlling human beings within a comprehensive system founded upon repression, instrumentalism (“L’instrumentalisme”), and coercion. Rationality, in this sense, sought to construct a rational image of the world **(Hafiz, 2012, p. 143)** or rather, a “rationalization of the worldview” **(Hallaq, 2014, p. 152)** in which human beings are integrated with nature. It constitutes a coherent and comprehensive framework for producing control through four principal dimensions: industrialization, capitalism, the war industry, and the surveillance of all aspects of social life. It is a vision in which elements of confidence, anxiety, and accelerated modernization intermingle, while simultaneously calling for the unification of the world and the construction of a mode of thought governed by reason, interest, and pleasure. **(Hafiz, 2012, p. 143)**

It is also a process of mobilizing the vast machinery of production and consolidating propaganda (“Propagande”) and media (“Media”) in the service of modern society, whereby the concepts of liberation and culture become emptied of meaning through the imposition of reason as an instrument of domination, integration, oppression, separation between social classes, and the spread of individualism. This rational conception of the world caused many concepts such as “progress,” “liberation,” “democracy,” and “human rights” to collapse, giving

way instead to tyranny, repression, totalitarian systems, and the construction of consumerist societies destructive to human nature. **(Lukács, 1960, p. 114)**

This is what Georg Lukács referred to as “reification” (“La Réification”),. **(Lukács, 1960, p. 82)** produced by a rigid and apparently rational system through which human beings, under capitalist ideology, are transformed into individuals immersed in the world of commodities and market logic that uses the individual independently of his own will. **(Marcuse, n.d, p. 41)** This is likewise what Herbert Marcuse termed the “one-dimensional man,” who emerges within a one-dimensional society **(Touraine, 2020, p. 180)** an industrial society founded upon the logic of consumption, comfort, entertainment, labor, fashion, and the pursuit of suggestive advertising dictated by others. Such a society represents a form of domination, repression, and self-surveillance. **(Taha Abdurrahman, 2017, p. 132)**

This individualistic mode of life confines contemporary human beings within the framework of rationalization, accompanied by profound transformations that are often manifested in social domination and the multiplication of surveillance mechanisms. Education itself becomes reduced to the mere integration of social categories into groups, which is ultimately nothing more than an attempt to subordinate education to personal interests in order to achieve the greatest possible degree of social control. **(Taha Abdurrahman, 2017, p. 133)**

Within the framework of instrumental rationality, surveillance becomes concentrated in scientific institutions, insofar as these institutions are active agents in the pursuit of knowledge. This leads to the belief that vision can penetrate everything, regardless of the nature, type, or distance of the object observed. Such a conception forms the “will to see” within the seeker of knowledge, whereby “there is nothing that cannot be seen, and everything that is visible will eventually be seen, sooner or later.” **(Taha Abdurrahman, 2017, p. 133)** In this way, science coupled with technology becomes the uncontested master of vision **(Taha Abdurrahman, 2017, p. 134)** controlling, directing, and contributing to the construction of a “civilization of vision,” in which science assumes the role of a deity governing the various domains of life. **(Taha Abdurrahman, 2017, p. 135)**

The practice of surveillance also manifests itself within economic institutions through the “love of consumption” and the authority exercised by commodities over individuals under the slogan: “Consume without restraint, and enjoy without accountability.” **(Jaafar, n.d, p. 140)** This unleashes the desires of the consumer, such that consumers, customers, and employees alike all become subject to surveillance within these institutions. **(Russel, n.d, p. 108)**

Moreover, surveillance appears within security institutions, where this form of monitoring reaches its peak, giving rise to what is termed the “security society.” This society extends its authority over the lives of individuals, intervening in their affairs and personal conditions. Surveillance intensified particularly after the events of September 11, 2001, which targeted symbols of power within the capitalist system. Today, it continues to spread widely as the phenomenon of terrorism escalates across different parts of the world. **(Himmelfarb, 2009, p. 08)**

In addition, surveillance is evident within military institutions as an inclination toward possession and the pursuit of domination in its various forms and manifestations. This is what is now referred to as the preservation of national security. The concept has expanded to

encompass the defense of the homeland against dangers and external threats that may undermine its existence and integrity. (Boumnir & Kamel, 2010, p. 19)

It becomes clearly evident that Western modernity makes rationality a direction and a worldview through which the world is rationalized. In this process, modernity systematically seeks to strip the world of its sacredness and enchantment, and consequently to impose domination over nature through rational laws governing nature and the universe. The image of rationality later expanded to produce instrumental rationality as a means of controlling human beings and society through what is called the rationalization of politics and society, as well as through the imposition of a mode of life founded upon consumption, the market, and the pursuit of fashion.

Within rationalized society, the individual becomes deprived of freedom and held captive by economic institutions and authoritarian and totalitarian systems that shape consciousness through media screens, advertising, and the imposition of the model of the consumerist individual and the “religion of the market,” in the words of Pascal Bruckner. In this context, consumption and domination become a worldview that structures reality and imposes a specific way of life. The discussion may thus lead us to conclude that the modernist vision of the world through rationalization represents the highest stage attained by modern humanity.

All of this prompted philosophers and sociologists to reconsider the values of modernity and its essential correlates (Todоров, 2007, pp. 9-10) including rationality itself through criticism and revision, acknowledging the malaise that emerged within the structure of modernity as it turned against the very values carried by Enlightenment philosophy, such as freedom, reason, and progress. Under instrumental rationality, freedom was transformed into further domination and repression; reason appeared as an authoritarian and despotic instrument; and progress became confined to the imposition of a culture of consumption and industrialization.

1.1. The Enlightenment as a Foundation for the Emergence of Instrumental Rationality

The Enlightenment is considered a civilizational manifestation within modern Western thought, particularly during the eighteenth century. It is also referred to by some as the “Age of Reason,” to the extent that the term Enlightenment (“Enlightenment / Lumière”) may be substituted with “Age of Reason” without altering the meaning, insofar as the Enlightenment represents the liberation of reason from the authority that had imprisoned it. Nevertheless, there exists a tendency among historians of Western civilization to distinguish between the “Age of Reason,” which encompasses the seventeenth and eighteenth centuries, and the “Age of Enlightenment,” which specifically refers to the eighteenth century alone (Kant, 2005, p. 85) a period during which rational ideas and attitudes spread widely throughout Europe and the world after the bloody conflicts witnessed during the sixteenth and seventeenth centuries. (Naqqari, 2018, p. 190)

The Enlightenment was closely associated with the spread of scientific knowledge through a new orientation that advocated following the views of scientists rather than the authority of Aristotle and the system of the Church. The idea emerged that every individual should act according to his or her own judgment. Consequently, individuals began to look directly toward

nature themselves rather than placing blind trust in inherited ideas and outdated theories. **(Naqqari, 2018, p. 191)**

In light of the foregoing, it becomes evident that the Enlightenment era carried within it a worldview founded upon reason, which had long been captive to the authority of Aristotle and the teachings of the Church. This vision began to take shape in the seventeenth century with the philosophers of reason, who established the horizon of the Enlightenment and the foundations of Western modernity through their various emancipatory ideas.

The Enlightenment, above all, was a movement of ideas grounded in reason, nature, truth, morality, freedom, and progress. It represented the construction of a civilization founded upon reason, social relations, and material forces. **(Touraine & Alain, 1998, p. 19)** and embodied the essence of the Western civilizational and cultural project that proclaimed the liberation of humanity from its passive condition, the disenchantment of the world, and the destruction of myths. **(Touraine A. , 2020, p. 30)** This was achieved through rationalism and empiricism, regarded as the intellectual “genes” of both René Descartes and John Locke. The Enlightenment also carried the ideas of autonomy and the purposive character of human action in the world. **(Elmessir, 2009, pp. 190-191)**

Perhaps the first constitutive characteristic of Enlightenment philosophy lies in making us prefer what we choose and decide for ourselves, rather than what is imposed upon us by an authority external to our will, and in rejecting submission to commandments forced upon humanity outside its own volition. **(Abdurrahman, 2007, p. 20)** For this reason, the Enlightenment was defined by Immanuel Kant as: “Man’s emergence from his self-incurred immaturity, which is his own responsibility. This immaturity signifies humanity’s inability to use its own understanding without the guidance of another. A person is himself responsible for this state of immaturity when its cause lies not in a defect of reason, but in a lack of determination and courage to use it without the guidance of others. Dare to know; have the courage to use your own reason **(Abdurrahman, 2007, p. 20)** that is the motto of the Enlightenment.” **(Stanciu, 1989, p. 15)**

Through Kant’s response to the question “What is Enlightenment?”, it becomes clearly evident that the Enlightenment represents the liberation of human beings from the authority that long constituted an obstacle both to them and to human reason itself. More profoundly, the human being is considered responsible for the condition of incapacity that has dominated him, rendering him unable to think independently from the guidance of others. The slogan of the Enlightenment embodied a worldview according to which human reason is the measure of all things, and human beings do not require the direction of others as much as they require the courage to exercise reason and thought.

Thus, the Enlightenment emerged as an act of courage in thinking and criticism without the guardianship of others, and as freedom without dependency. This rational vision of the world contributed significantly to the rise of modern Western civilization and the construction of the horizon of Western modernity as a worldview possessing its own ethical, behavioral, and social dimensions, as well as its cultural system that shapes contemporary human beings according to the model of modernity.

2.1. The Model of Rationality as a Foundation for the Emergence of Western Modernity

In discussing modernity, it is always necessary to distinguish between modernity and modernization. The term “Modern” is derived from the Latin origin *Modernus*, which denotes the new, current, or present reality, whether as a condition or an opinion. It itself derives from the combination of the prefix *modo-* signifying immediacy or non-delay, and *hodiernus*, meaning “of today” or “daily.” Consequently, the concept of *Le moderne* philosophically referred to the description of Christian thinkers (*moderni*) and their distinction from the ancient pagan thinkers of Greek and Roman antiquity. **(El-Kour, 2013, p. 28)**

By contrast, the concept of “Modernism” refers to the style characterizing the contemporary and present age in its latest developments and innovations. **(El-Kour, 2013, p. 29)**

Here, the clear distinction between the concepts of “the modern” and “modernity” becomes evident. The former that is, “the modern” generally refers to the distinction between the Christian era and the preceding era of paganism and superstition. Modernity, on the other hand, is a vision and a style that characterizes human life in its most advanced developments across various fields. **(Touraine & Alain, 1998, p. 30)**

The subject of modernity occupies a prominent intellectual position in the contemporary world, insofar as it generally describes the condition of Western societies since the Renaissance. It encompasses economic rationalization, political democracy, and rationality as a mode of thinking opposed to the superstitious mentality that prevailed during and before the Middle Ages.

Modernity is usually associated with the triumph of reason, since reason alone establishes the connection between human action and the order of the world. Upon reason are founded freedom, personal happiness, and the satisfaction of needs. **(Malakawi Hassan Fathi, 2021, pp. 51-53)** In order to formulate a concept of modernity, some thinkers approach it through rationality (“Rationalisme”), given that modernity both as a reality and as a concept is closely linked to reason. To abandon one is effectively to reject the other. Indeed, many thinkers prefer to reduce modernity itself to rationality. **(Descartes, 1991, p. 83)**

By contrast, Abdelwahab Elmessiri argues that defining modernity merely as the use of reason and technology in dealing with reality is a definition that neglects its overarching and ultimate epistemological dimension. According to Elmessiri, in order to define modernity more accurately, it is necessary to restore this cognitive dimension, through which we discover that modernity is not simply the use of reason, but rather the use of reason outside a human and ethical framework. Thus, modernity is “the use of reason, science, and technology detached from reality.” **(Boumnir & Kamel, 2010, p. 51)**

From this perspective, modernity is often reduced to rationality, regarded as the fundamental cornerstone from which the Western civilizational project emerged. The manifestations of this reason across various human and social dimensions, together with its close connection to modernity, make it extremely difficult to formulate a comprehensive and definitive definition of modernity. This is precisely what leads Elmessiri to establish a connection between modernity, reason, and reality.

Furthermore, modernity has fallen into what Taha Abdurrahman calls the affliction of the “magnification of the concept.” This exaggeration transformed modernity into a strange entity

possessing the freedom to act upon living beings and objects as though it were an all-powerful deity. Such a characterization, however, is in reality non-modern. Consequently, according to Taha Abdurrahman, defining modernity requires distinguishing between the “reality of modernity” and the “spirit of modernity.” **(Abdurrahman, 2007, p. 13)**

The first namely, the reality of modernity refers to its Western applications and represents merely one possible manifestation among many potential forms. The second the spirit of modernity constitutes the underlying essence upon which the West built its civilization. Based on this distinction, modernity is defined as: “the rise of a nation, whatever it may be, to fulfill the obligations of a particular era in human history, in such a way that it becomes distinguished by that era above others and assumes responsibility for advancing it toward the completion of humanity.” **(Bouhnash, 2017, p. 257)**

Thus, modernity is not merely an event experienced by contemporary societies; rather, it is a set of social and behavioral values that emerged in the West through a series of historical developments and accumulations which reshaped societies and fashioned a human being who calls himself contemporary and modern. This occurred through the model of rationality, which became the essence of Western modernity. For this reason, it is difficult to discuss modernity independently of rationality as a worldview that laid the foundations of Western civilization and constructed the features of modernity.

Indeed, every civilization possesses a cosmological conception of the world a vision through which human beings understand all forms of existence. The dominant conception within any civilization is what determines its characteristics and creates coherence among its elements and forms of knowledge. This vision is, in reality, the framework of civilization and the criterion by which civilization itself is measured. Consequently, Western civilization since the Renaissance has sought to formulate a conception of the world as an alternative to the narratives of bygone ages. The issue, therefore, is fundamentally a question of vision a vision of the world. **(Descartes, 1991, p. 86)**

Since modernity is a worldview, it is generally intended to refer simultaneously to reason as a mode of thought founded upon rational knowledge; to critical questioning through examination and justification; to freedom as maturity without guardianship and independence without dependency; and to progress as a continuous process of growth and development. **(Lalande, n.d, p. 1256)** This is what is commonly observed among advocates of modernity in terms of rationality, liberation, and progress. **(Bouhnash, 2017, p. 25)**

Alain Touraine goes so far as to equate modernity with rationality in Western thought, arguing that: “What characterizes Western thought at its strongest moments, in its identification with modernity, is the will to move from the limited role of the process of rationalization toward the broader idea of a rational society a society in which reason not only directs scientific and technical activity, but also governs human affairs and the order of things. Modernity and modernization, insofar as they create a rational society, conceive this notion as a system and structure founded upon calculation, and at times make reason an instrument in the service of individuals.” **(Mayor, 1987, pp. 59-60)**

Therefore, from the foregoing discussion, it becomes clearly evident that Western civilization is generally reduced to the model of modernity and its earliest formations through rationality.

Rationality, in its broad sense, is not merely the scientific activity employed in acquiring scientific knowledge; rather, it is a general worldview founded upon the rationalization of society, whereby society itself, under rationality, is transformed into a comprehensive system and orientation serving individuals and communities.

Rationality and materialism constituted some of the essential correlates that shaped the Western system of modernity in its broadest sense. Indeed, the expansion of the scope of rationality transforms it into a comprehensive worldview. (Marcuse & Herbert, 1973, p. 83)

2. From Instrumental Rationality to Technological Rationality

It is certain that instrumental rationality developed directly from the beginning of the modern era, supported by the philosophies of René Descartes and Francis Bacon, both of which strove to impose a culture of domination over nature through understanding it and attempting to regulate it. Hence, Descartes declared that humanity must make itself “master and possessor of nature.”

This means that the project of domination, grounded in knowledge and its scientific and technological applications, came to encompass human existence in all its dimensions. Such a project profoundly affected the various civilizational dimensions experienced, in principle, by all industrially advanced human societies. (Habermas, 1973, pp. 05-06)

Accordingly, technological or technical reason is nothing other than the result of that instrumental reason whose features first emerged in the modern age, attempting to dominate nature through its regulation and comprehension. It subsequently evolved into a form of technological rationality that appeared as a consequence of scientific and technological development and as one of the applications of contemporary science, aiming at subjugating and controlling contemporary human beings. (Habermas & Jürgen, 2006, p. 24)

1.2. Manifestations and Expressions of Technological Rationality

The Greek word *Tekhné* carries a technical and artistic meaning, referring to a set of practical mechanisms that enable the performance of operational tasks. It encompasses the notions of adaptation and transformation following the acquisition of knowledge. In this sense, technology may be understood as the science of technique (Boumnir & Kamel, 2010, p. 56) an integrated mechanistic domain combining scientific conceptions with practical application. (Kaku, 1978, pp. 14-15)

Technology, as previously noted, is the result of the gradual development of the technological field itself, which represents an inevitability inseparable from the reciprocal interaction between the systems associated with modernity, namely science and the liberal economy. This is particularly true insofar as the consciousness of rationalization has remained inseparable from the notions of sovereignty and domination over nature. (Mayor, 1987, p. 60) within the framework of reason’s capacity to explain the world after its disenchantment and desacralization.

The concept of technique also refers to the totality of studies concerning technical applications and their relationship to civilizational development and scientific progress. André Lalande identifies the temporal sphere in which technology emerges, considering it one of the defining

characteristics of the twentieth century, since these manifestations are linked to the results of science and therefore express the domination exercised by reason over nature as a bold attempt to alter or improve the human condition. **(Attali, n.d, p. 156)**

It should be noted in this context that the dominance of technology has produced what Taha Abdurrahman calls the “technical world,” in which technical reason has come to control human beings at all levels and in all directions. Human beings, under the domination of technology, have become constrained and deprived of freedom of action. Whereas humanity initially sought, through technology, to harness the universe for its benefit and dominate nature, technology eventually reversed this relationship: domination shifted from the control of nature to the control of human beings themselves that is, the domination of human over human.

This development gave rise to what Herbert Marcuse termed the industrial and technological society, which produces the “one-dimensional man.” Within industrial and technological society, the individual becomes a victim of domination, hegemony, and repression on social, psychological, cultural, political, and economic levels.

Among the mechanisms that extend domination over human beings in the world of technology and industrial society are: the manipulation of minds through the promotion of ideas by means of pre-packaged and standardized consciousness disseminated through the media; the mechanisms of domination and punishment exercised through institutional surveillance cameras; and the control of individuals through the direction of art and culture via cinema screens and advertising. **(David K. Naugle, 2002, p. 83)**

The model of domination is likewise manifested through capitalism, the ideology of consumption, and the hegemony of individualism and subjectivism over contemporary humanity. Consequently, under technological rationality, human beings have become victims of technology and instrumentality, both of which have become among the defining characteristics of the twentieth century.

2.2. The Model of Domination under Technological Rationality

It may therefore be said that technology is the defining phenomenon of the twentieth century, insofar as it is closely connected to the results of science. Consequently, it represents the expression of the sovereignty that reason has established over nature. At its core, technology also signifies a transformation of nature in the service of humanity and an improvement of the human condition. This, in turn, is nothing other than a manifestation of the concept of progress upon which Enlightenment philosophy and the doctrine of modernity were founded, as another expression of human hope and the aspirations of modern humanity in its relentless pursuit of the power to dominate.

Thus, technology becomes an applied field and a complex mechanism grounded in adaptation and transformation. The manifestations of contemporary civilization are merely expressions and embodiments of the capacities made possible by technology. Technology appeared as though it were the necessary and inevitable culmination of science, resulting from the alliance between interest and science, manifested through technique that came to guide and direct it. Consequently, a necessary shift occurred whereby technique moved toward science itself a science founded upon the desire for appropriation and possession. **(Alexandr, 2023, p. 19)**

Discussion of technology as a gradually expanding phenomenon has become increasingly evident, appearing as a sudden and unexpected transition in which feelings of happiness and confidence in scientific and technological progress became intertwined with anxiety and reflections marked by the loss of trust, alongside the emergence of disappointment and despair regarding the expansion of scientific knowledge and technological capabilities.

At the same time, the sense of dissatisfaction intensified, accompanied by the growing feeling that these technologies are merely instruments directed from afar by centers of power imposing domination and hegemony over humanity. Although scientific and technological development has contributed significantly to increasing human welfare on all levels, human beings have also come to realize that the technological realities revealed by science are driving the world toward collapse and increasing deterioration as a consequence of that very scientific and technological progress. **(Boden, 2022, p. 11)**

This means that the enormous scientific, technical, and technological development clearly visible in various tools, machines, technologies, household electrical appliances, as well as nuclear and biological weapons is, so to speak, managed by entities that, through these means, impose control over human beings in ways that serve their own interests. In this sense, the Western world is governed and directed by a small group of ruling figures who exercise repressive power over both human beings and nature.

Accordingly, industrially advanced societies appear to be different from what they once were, as they seem to shift from overt forms of oppression and exploitation toward a new rational form or pattern, commonly referred to as “rationalization,” whose aim is a form of rationality that reflects a particular type of concealed and veiled domination, whether over nature or over human beings. **(Boumnir & Kamel, 2010, p. 20)**

Thus, the human being has come to realize that technological development is nothing but the result of scientific progress and the inevitable transition from instrumental rationality emerging in the modern era with the aim of dominating nature to technological rationality, which seeks to control human beings along with their psychological, social, and economic systems. As a result, the sense of danger increasingly grows, as humanity finds itself facing an imminent threat that now lies close at hand, especially since the use of technology has begun to exceed the boundaries of human dignity and has turned into a means of controlling human beings themselves.

Accordingly, new technological developments produce broad social configurations that, so far, have corresponded to profound social upheavals. These social transformations have been primarily driven by technological innovations in the fields of production, exchange, communication, and transportation. All of this is the outcome of the representations generated by social and cultural rationality, which has advanced in parallel with scientific progress and modern technologies. Indeed, the more these technologies expand and become refined bringing nature increasingly within human reach the more they are tied to promises of economic growth, increased productivity, rising welfare, and greater freedom in individual decision-making from a political perspective. Thus, while the expansion of freedom of choice enhances individual autonomy, science embodied in technology simultaneously produces further domination, repression, and control. **(David K. Naugle, 2002, p. 22)**

It can be said that the earlier view of nature was characterized by a mathematical orientation, through the construction of a worldview that is neither innocent nor neutral. Rather, it is based on a practical stance aimed at achieving utility, stemming from the abstract nature that has distinguished scientific knowledge. In this sense, technology is not merely a practical application of scientific knowledge; rather, beyond being the result of instrumental reason as a stance toward nature, it is a worldview and an attitude toward human beings based on control, regulation, direction, and psychological, social, and cultural domination.

Therefore, the perspective proposed in light of the scientific and technological development is that today's scientific predictions about the future are based on established scientific knowledge, including those advanced by social critics or even earlier scientists who made forecasts before the main scientific laws were fully known. Many have succeeded in anticipating the broad outlines of the future, which undoubtedly reveals some surprising outcomes, shifts in purpose, and troubling gaps within these visions presented as forecasts of the future. It is also certain that some major discoveries and inventions of the twenty-first century may be anticipated. Consequently, by focusing on the interrelations between the three major scientific revolutions, and by consulting scientists who are actively engaged in advancing these revolutions and examining their discoveries, I hope to be able to perceive the direction of science in the future with great precision and insight (**Bauman, 2017, pp. 30-31**).

Accordingly, the phenomenon of technology has become increasingly oriented toward despair as it continues to grow and become more visible. This represents a sudden and unexpected transition from feelings of joy and confidence in technological progress to a sense of loss of trust, followed by disappointment and despair. Thus, the more human knowledge and the technical capabilities derived from it increase, the more the sense of fear regarding the future rises at the same time. This is due to the emergence of new means that accumulate information and energy within extremely small units. All of this is achieved through technologies capable of storing energy and information in nanoscale systems. These devices will lead to the development of intelligent robots capable of performing human tasks such as reading, construction, habitation, and movement, as well as producing driverless cars and other unprecedented devices that humanity had never previously imagined (**Abdurrahman, 2007, p. 162**).

3. Artificial Intelligence and the Manifestations of Smart Technology

Fifteen years ago, thinking about artificial intelligence was confined to a narrow circle of specialists and researchers. For the rest of the world, it was merely a subject of science fiction, featuring more hostile machines interacting with humans, either as terrifying robotic enemies or loyal companions. No one imagined that artificial intelligence would one day become a contemporary reality that moves beyond the screen and enters our everyday lives.

However, within a few years, AI emerged as a wave of transformations occurring in science today. Within twenty years, we have moved from mobile phones to smartphones, and from instrumental rationality to artificial intelligence. The internet and social networks have effectively become technological manifestations of the development upon which AI is based.

It has become omnipresent, its developments extremely rapid, and our society increasingly dependent on it at every moment. **(Boden, 2022, p. 38)**

The primary objective of artificial intelligence is to enable computers to perform tasks that the human mind can execute. These tasks such as reasoning are typically described as “intelligent.” In this sense, intelligence is not a single dimension but rather a multi-layered structure with rich organizational aspects and diverse capacities for information processing.

Accordingly, artificial intelligence employs many different techniques to perform a wide range of tasks. Its applications are found in homes, cars, offices, banks, hospitals, internet networks, and robotic systems that live alongside humans, as well as those sent into space, the Moon, and Mars. AI is also present in children’s games, video games, computers, and smart search engines used by investors for prediction, in addition to systems used by governments to assist in decision-making related to health, transport, and infrastructure. **(Boumnir & Kamel, 2010, p. 367)**

1.3. Technology and the Imposition of the Consumer Human Model

It is no secret that the expansion of the modernist worldview has shaped the model of modern human beings. This latter has come to bear the consequences of Western civilization and the foundations of a crisis-ridden modernity. In this regard, Herbert Marcuse (1898–1979) follows in the footsteps of earlier generations of the Frankfurt School in diagnosing the modern human model in a way that reflects the qualitative crisis experienced by modernity. He describes it as the “one-dimensional man.” Marcuse draws on the general orientation of the Frankfurt critical school, which undertook the task of re-examining the values of Western civilization, including the products of modernity.

According to Marcuse, modern society is a one-dimensional society, based on the intensification of biological human needs and dominated by prevailing institutions and interests. In this sense, human needs under modernity and within the framework of rationality become necessary needs shaped in relation to a society that suppresses the individual and works to satisfy people’s needs according to the standards of the present order **(Descartes, 1991, p. 88)**. In this context, Marcuse refers to the one-dimensional man as a simple, non-complex human being, as Abdelwahab El-Messiri puts it. This human model is the product of modern society, and it is also the outcome of a one-dimensional social order dominated by instrumental reason, technological rationality, and a materialistic orientation. The motto of this society is scientific, industrial, and material progress, and the achievement of welfare and consumption. It is dominated by large administrative institutions and capitalist structures that control production and distribution processes. **(Bouhnash, 2017, p. 228)**

The one-dimensional man is a human being dominated by material desires that seek to produce a distorted nature of contemporary man. He becomes a functional individual whose concerns are centered on the production and consumption of goods. His horizon does not extend beyond the world of markets, commodities, and products. He is a one-dimensional consumer: an economic and bodily human being who lives within the bounds of nature without transcending it, deprived of critical reason under the weight of a deadly rationality and technological

materialism. This is the aspect that René Guénon addressed in his critique and reassessment of Western civilization.

The one-dimensional man is the immediate outcome of a consumer society whose concerns are increasingly shaped by media advertising, promotion, and the marketing of goods and commodities. He is freed from all forms of religion, morality, and faith. This excessive consumption can be traced back to the arbitrary distribution of individual taste and subjective preference on an inner level, as well as to the penetration of family and school under various labels such as decoration, art, music, and fashion. All of these institutions are under siege and subjected to different forms of repression and control resulting from instrumental reason, which modernity has paved the way for since the Renaissance and the optimism of the Enlightenment. In this context, freedom has turned into further mechanisms of control and repression; reason has become a tool for intensifying surveillance; and progress has become a means of producing commodities, promoting goods, and packaging human minds. **(Abdurrahman, 2007, p. 368)**

2.3. Technology and the Model of the Surveilled Consumer Human Being

Modernity sought to liberate the human being from a magical and mythical worldview, yet this very process gradually turned into a nightmare that haunts contemporary man. The latter now finds himself trapped within a form of freedom that constantly targets the “ideal producer,” while the culture promoted by markets targets the “ideal consumer.” Each of these two models focuses on a specific dimension of freedom. The liquidity that characterizes our crisis tends toward the dismantling of systems and the spread of what Bauman calls a “state of uncertainty,” combining feelings of ignorance and helplessness, as well as fear and the erosion of stability. Consequently, alternative patterns are imposed on contemporary humans: the model of consumption and the “religion of the market,” through which modern individuals are transformed into “liquid humans” living in a state of uncertainty within a fluid and unstable modern society. **(Bauman, 2017, p. 185)**

What characterizes liquid life is “creative destruction,” a process that targets multiple systems, including the human being himself, who lives within a society of transient, momentary values devoid of lasting concerns. These are fleeting moments centered on impact, pleasure, and instability a life marked by imbalance, rapid dissemination, and constant renewal through permanent mobility. Liquid life is nothing other than a consumerist existence based on continuous consumption, turning the entire world into an object of consumption. In this way, consumption and consumers become the two poles around which consumer society revolves. **(Ibrahim, n.d, p. 50)**

Thus, “liquid life grants to the world and even to all that is within the world, not merely to part of the self a fundamentally instrumental value.” This means that instrumental value becomes the prevailing fashion of both human beings and liquid life. In this sense, modern liquid society amounts to a declaration of the decline of the idea of the “virtuous society,” since liquid life is not governed by a logic concerned with social reform, but rather pushes society toward the gradual abandonment of all values except those of security and surveillance, which function to protect individuals. Moreover, it drives society into a state of fear toward everything, including the emergence of new environmental anxieties that are ultimately rooted in the misuse of

resources on this planet. Even further, it reinforces the dominance of individual selfishness as one of the most prominent manifestations of liquid life. This selfishness consists in focusing solely on the self while disregarding the conditions of shared social life, where the highest aspiration of the individual within liquid modernity is the pursuit of happiness, which becomes the apparent and ultimate goal as well as the supreme motive of individual life. This individual life, which grips contemporary human beings within the framework of liquid life, is marked by profound transformations that often take the form of intensified social control and an increasing number of surveillance mechanisms. Education itself becomes merely a process of integrating social groups into broader collectives, which is nothing other than an attempt to subordinate education to private interests in order to achieve the greatest possible degree of social surveillance. **(Marcuse & Herbert, 1973, p. 275)**

From the foregoing, it becomes clear how excessive selfishness accompanies the individual in liquid modern society, as well as the state of fear and uncertainty that dominates the contours of liquid life. Values that once contributed to building society and shaping human beings gradually decline or rather are reversed into values confined to the subjective and the immediate. This coincides with the expansion of various forms of social and institutional surveillance and the widening of control mechanisms.

According to Zygmunt Bauman, Michel Foucault's (1926–1984) insightful analyses of surveillance in modern society provide a model that can be applied across all social institutions, where individuals are placed under constant supervision in prisons, factories, hospitals, workplaces, and even psychiatric institutions. In this way, individualism becomes a product of social transformation that disguises itself under the appearance of personal exposure, while society loses its capacity to organize and shape human actions. The rise of individualism signals the weakening, fragmentation, and disintegration of the dense network of social bonds that once firmly structured contemporary human life. **(Todorov, 2007, p. 65)**

Human beings thus become victims of the “astounding speed” at which the world moves, and they are increasingly unable to control this accelerating change that characterizes liquid modernity. From this perspective, the idea of progress in such a reality becomes nothing more than naïve optimism that aspires to achieve universal and permanent happiness for all. Progress thus turns into a source of anxiety and into nightmares governed by the fear of falling behind and failing to keep up with constant change. **(Touraine & Alain, 1998, p. 359)**

It can be argued that the ideas of progress and freedom, long celebrated by the Enlightenment and glorified by modernity, have, in the age of liquidity, turned into a severe form of misery that engulfs contemporary societies. This deepens the logic of domination, especially with the emergence of what is known as “instrumental rationality,” which imposes a specific form of control over contemporary human beings in industrially advanced societies. Moreover, liquid life has led to the erosion of all boundaries and domains in the name of “globalization,” revealing what Karl Popper (1902–1994) called the idea of the “open society.” As a result, all societies have become materially and intellectually open. This dream, which accompanied Popper, indicates according to Bauman's interpretation the acknowledgment of the incompleteness of society, and thus a society incapable of self-determination and of achieving certainty.

This incompleteness of openness is due to the negative effects of “negative globalization,” based on commercial selectivity, capital, informational surveillance, violence, the spread of crime, dependency, and the emergence of forces that human beings can neither understand nor control. Therefore, life in the age of liquidity is characterized by constant change and continuous becoming that cannot be kept pace with; human beings are swept along by it while constantly attempting to grasp the ever-renewing manifestations of fluid life. In this context, the individual is transformed into a mere consumer, and consumption becomes a one-dimensional model, as Abdelwahab El-Messiri puts it, a worldview adopted by all peoples, based on the logic of commodities, markets, and the dominance of materiality. (Marcuse H. , n.d, p. 22)

Conclusion:

Ultimately, it can be said, after this analysis, that modernity has deviated from its course to such an extent that it has been turned upside down, reversing everything it once promised and optimistically proclaimed. Progress has been reduced to a form of frantic consumption imposed on contemporary human beings through the dominance of the market and commodities; freedom has been transformed into increasing forms of control and social and institutional surveillance over the individual.

The distressing condition to which modernity has led has prompted many philosophers and sociologists to critically reassess and evaluate it. “Liquid modernity” is nothing more than a description and diagnosis of the transformation undergone by modernity as it shifted from an era of solidity to a model of liquidity. This latter has produced and even imposed a different way of life, distinct from the values and optimism of the Enlightenment. Life has become continuous and fluid consumption, driven by the pursuit of markets, commodities, and ever-increasing fashion demands. All of this has produced a “one-dimensional man,” a materialistic human being whose sole aim is the satisfaction of desires.

Moreover, this transformation inherent in modernity has also targeted the human self and social bonds, which were once the primary foundation for establishing relationships. Under the paradigm of liquidity, these relationships have turned into fleeting, virtual connections based on change, impermanence, and the breaking of stable and real ties. Within this virtual connectivity, the human being’s ultimate concerns become pleasure, immediacy, and sexual gratification.

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¹Michel Foucault proposed the idea of the “disciplined body” that produces a disciplinary society, as a procedure embodied by modernity through institutions and functions. This procedure consists in integrating society as a whole into a rationalized disciplinary network, where discipline signifies control and surveillance extending from the individual body to the social body. See: Michel Foucault, *Discipline and Punish*, translated by Ali Muqallid, National Development Center, Beirut, 1990, p. 35.

²-This is also the point emphasized by Wael Hallaq, who argues that the Western system of knowledge is directly established in the service of power, domination, and the transformation

of the world. Knowledge, in its precise sense, becomes an engagement in practices of power and world transformation. Bacon, in the fourteenth century, is considered the first to formulate the phrase “knowledge is power.” See: Wael Hallaq, *The Impossible State: Islam, Politics, and Modernity’s Moral Predicament*, translated by Amr Othman, Arab Center for Research and Policy Studies, Doha, 1st ed., 2014, p. 152.

³-Concerning the disciplinary revolution, see: Philip Gorski, *The Disciplinary Revolution: Calvinism and the Rise of the State in Early Modern Europe*, University of Chicago Press, Chicago, USA, 2003.

⁴-“Reification” (“La Réification”) is a concept employed by Georg Lukács in his book *History and Class Consciousness*, through which he attempts to analyze the phenomenon of reification produced by society under the domination of capitalist ideology in the West. In this context, the human being is transformed into an object that can be bought and sold, insofar as the psychological dimension itself becomes a commodity in the hands of producing corporations.

⁵-Human beings are thereby reduced to mere natural phenomena subjected to specific laws external to human will. In Lukács’s framework, reification is one of the direct consequences of the model of modernity and the transition from domination over nature to domination over humanity. See: Georg Lukács, *History and Class Consciousness*, translated by Hanna Al-Shaer, Dar Al-Andalus, Beirut, Lebanon, 2nd ed., 1982, pp. 79–80. See also:

Georg Lukács, *Histoire et conscience de classes*, translated by Kostas Axelos, Éditions de Minuit, Paris, 1960, p. 114.

⁶- It may appear to some that what is meant by the “contemporary human being” refers specifically to the Western individual. However, the identity of the contemporary human being may be shared by people everywhere, since this civilization has spread throughout the entire world. Therefore, the contemporary human being is no longer merely one self among others or a particular individual; rather, he has become “a moral and mental model rather than a concrete entity,” or, in other words, “an embodied behavioral model rather than an abstract one.” See: Taha Abdurrahman, *The Religion of Modesty, Vol. 1: From Fiduciary Jurisprudence to Trust-Based Jurisprudence*, Arab Foundation for Thought and Creativity, Beirut, 1st ed., 2017, p. 13.

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