

*Artificial Intelligence as a tool for the social sciences: Exploring the gap between
programming and human experience*

الذكاء الاصطناعي كأداة للعلوم الاجتماعية: استكشاف الفجوة بين البرمجة والتجربة الإنسانية

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Abstract :

Our research on artificial intelligence and its connection to the social sciences does not examine the functional links between them. It is an invitation to reflect on the role of the social sciences and their subjects in the age of algorithms and data. This paper illustrates how AI has become a powerful tool for analyzing social data and understanding behavioral patterns, allowing a deeper exploration of new social dimensions. However, the paradox lies in the fact that this technology, despite its ability to analyze information, lacks the emotional and human understanding that is fundamental to the social sciences. This article examines how AI, despite its lack of human qualities, can enhance the social sciences by refining tools for analyzing and predicting social trends, while also addressing the ethical and societal challenges that arise from its application, including its impact on human identity and society.

Keywords: artificial intelligence; social sciences; social data; ethical challenges.

ملخص

إن عملنا حول الذكاء الاصطناعي وعلاقته بالعلوم الاجتماعية لا يرصد العلاقات الوظيفية بينهما. بل هو دعوة للتفكير العميق في موقع العلوم الاجتماعية وما تحمله من موضوعات في هذا العصر الذي يعتمد بشكل أساسي على الخوارزميات والبيانات. من خلال هذا الطرح، سنفهم كيف أصبح الذكاء الاصطناعي أداة قوية لتحليل البيانات الاجتماعية وفهم الأنماط السلوكية، وهو ما يسمح لنا بالنظر عن كثب إلى الأبعاد الجديدة للمجتمع. إلا أن المفارقة تكمن في أن هذه التكنولوجيا، على الرغم من قدرتها على تحليل المعلومات، إلا أنها تفتقر إلى الفهم العاطفي والإنساني الذي يشكل أساس العلوم الاجتماعية. في هذا المقال، نتأمل كيف يمكن للذكاء الاصطناعي، رغم عدم امتلاكه للروح الإنسانية، أن يساهم في تطوير العلوم الاجتماعية من خلال تحسين أدوات تحليل الاتجاهات الاجتماعية والتنبؤ بها ومعالجة التحديات الأخلاقية والاجتماعية التي تنشأ نتيجة استخدام هذه التكنولوجيا، مثل تأثيرها على الهوية الإنسانية والمجتمع. كلمات مفتاحية: الذكاء الاصطناعي ; العلوم الاجتماعية ; البيانات الاجتماعية ; التحديات الأخلاقية .

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1- Introduction

In an era characterized by the pervasive influence of artificial intelligence, it has become imperative to take a moment to contemplate the intricate relationship between humans and machines, particularly in the context of comprehending the profound dimensions of human experience. While technological advancements have demonstrated their capacity to transform our daily lives, from accelerating routine processes to disrupting established fields such as medicine, education, and industry, a seminal question resonates within scientific and intellectual communities: Can artificial intelligence genuinely comprehend or embody the "human spirit"? This spirit encompasses reason, job performance, emotion, moral values, and profound subjective experiences. While artificial intelligence relies on advanced algorithms that process data and analyze patterns, sometimes exceeding human capacity, it remains, in essence, a tool devoid of subjectivity or consciousness. Conversely, humans are characterized by a complex existential experience encompassing emotion, self-perception, and social and cultural contexts. These human dimensions pose a significant challenge to the capacity of AI to achieve genuine understanding or authentic interaction with humans. Philosophically speaking, this situation gives rise to questions regarding the nature of intelligence itself. Is intelligence merely the ability to solve problems and grasp patterns, or are there deeper dimensions associated with a sense of being? Philosophers such as Descartes have focused on consciousness as a fundamental aspect of human existence.

In contrast, others such as Heidegger have pointed out that human experience is deeply rooted in its historical and social contexts. This insight places philosophical constraints on AI, characterized by its lack of sensory expertise and cultural context. From an anthropological perspective, AI is not merely a technology; instead, it is a factor that is reshaping social and cultural relationships. The question, therefore, arises as to how AI can interact with radically different intercultural traditions and practices and whether it possesses the capacity to understand the spiritual dimensions that give meaning to many human activities.

1. Artificial Intelligence in the Social Sciences: The Role and Uses

Artificial intelligence has become a vital tool in the social sciences, providing advanced analytical techniques that transform how human behaviors and social interactions are studied. Researchers rely on artificial intelligence to analyze big data, vast amounts of information that cannot be handled by conventional means. This use opens new horizons for a deeper and more accurate understanding of socio-political and economic patterns (Saleh Fatima, 2019, p. 52).

1.1: Analyse big data and social trends

Big Data Analytics signifies a transformative methodology for processing and understanding extensive quantities of data. By integrating Artificial Intelligence (AI), researchers can derive insightful and actionable information from many data sources, including web platforms, corporate

databases, and other digital ecosystems. Sociology's application of modern tools, including machine learning, neural networks, and natural language processing, has created unparalleled potential for understanding human behavior and societal patterns. (Lynne Carter, 2020, p. 76).

These technologies are significantly applied in studying social media sites like Twitter and Facebook. These platforms produce vast content daily, including texts, photographs, and videos, valuable data sources for sociological research. Utilizing AI-driven models, researchers can analyze this content to reveal concealed patterns, monitor new trends, and acquire insights about public attitudes.

Text analysis algorithms can analyze extensive user-generated information to assess opinions regarding significant political or social concerns, like migration, environmental challenges, and gender equality. These models can detect nuanced differences in tone, diction, and sentiment, enabling researchers to develop detailed profiles of public opinion. Furthermore, image and video analysis technologies enhance this potential, facilitating the examination of visual representations and cultural symbols that may be difficult to capture through text alone.

The collaboration of Big Data and AI improves our comprehension of individual and collective actions while providing policymakers and organizations with essential tools for informed decision-making. By connecting raw data with valuable insights, Big Data Analytics is continually transforming the scope of sociological study.

1.2 Examine the impact of election campaigns and public policy

Artificial Intelligence (AI) has become a transformative tool in the social sciences, particularly examining the influence of election campaigns and public policies on public opinion. This integration of AI into political analysis allows researchers and policymakers to gain a deeper understanding of how voters react to campaign strategies, policy announcements, and political discourse, enabling the development of more effective and targeted interventions.

One of the most prominent applications of AI in this domain is the analysis of election campaigns. By collecting and analyzing data from various sources—such as social media platforms, news outlets, and public opinion surveys—AI systems can assess how different population segments respond to campaign messages. Sentiment analysis, a widely used AI technique, evaluates user-generated feedback's tone and emotional content. This allows researchers to determine whether campaign messages resonate positively, negatively, or neutrally with their intended audiences.

For instance, in a groundbreaking study of election campaigns in the United States, AI systems were utilized to analyze vast amounts of social media data, including tweets, comments, and shared posts. By applying machine learning algorithms to this data, researchers could accurately identify voter sentiment trends and predict voting behaviors. The study revealed that AI models could

achieve over 80% accuracy in forecasting election outcomes based on patterns in social media engagement and sentiment analysis (Lynne Carter, 2020, p. 78).

Beyond election campaigns, AI also offers significant potential in evaluating public policies. By tracking online discussions and user feedback, AI systems can give policymakers real-time insights into public reactions to proposed or implemented policies. For example, sentiment analysis can be applied to monitor how citizens perceive healthcare reforms, taxation changes, or environmental regulations. Such insights allow governments to refine policies to better align with public needs and expectations.

Moreover, AI's ability to process multimodal data—combining text, images, and videos—adds another layer of depth to political analysis. Researchers can analyze visual and textual content from campaign advertisements, debates, and policy announcements to understand how different communication mediums influence public perception. This holistic approach enables a more nuanced understanding of voter behavior and policy impact.

By harnessing the power of AI, the social sciences can bridge the gap between data and actionable insights. This empowers political actors to craft more effective strategies and enhances democratic processes by providing a clearer picture of public opinion dynamics in an increasingly interconnected world.

1.3 Culture and Social Interaction

In anthropology and cultural sociology, Artificial Intelligence (AI) has emerged as a revolutionary instrument for evaluating cultural patterns and comprehending the intricate dynamics of social interaction. Researchers can utilize sophisticated methods like image recognition, natural language processing, and machine learning to investigate the evolution of cultural values, traditions, and behaviors across societies and generations. AI has an unparalleled capacity to analyze and comprehend extensive datasets, facilitating a more profound and thorough investigation of cultural phenomena.

A significant use of AI in this field is the analysis of cultural transformations throughout time. By examining data from various sources, including social media, digital archives, and multimedia platforms, AI systems can discern patterns and trends that indicate the evolution of cultural norms and values. AI-driven algorithms can monitor the utilization of particular symbols, words, or imagery over decades to reveal nuanced yet important changes in cultural expression. These ideas are essential for comprehending the impact of globalization, technology, and migration on cultural identities and practices.

An exemplary instance of AI's application in cultural study is its utilization in exploring beauty. A recent study employed AI to examine millions of Instagram photographs, recognizing visual components, including facial traits, clothing styles, and environmental backgrounds. This

investigation uncovered generational disparities in the conception of beauty, illustrating that younger generations prioritize individuality and diversity, whilst older generations favor traditional or uniform criteria (Fatima Saleh, 2019, p. 54). These findings illustrate the function of social media as both a mirror of and a stimulus for cultural transformation.

In addition to visual data, AI facilitates examining textual and auditory content, offering insights into the evolution of language and communication patterns within cultural contexts. Researchers can employ natural language processing techniques to analyze alterations in linguistic patterns, like incorporating slang, emojis, or hybrid language forms, which frequently signify profound transformations in social interactions and cultural adaptability.

Moreover, AI has played a crucial role in analyzing the impact of technology on conventional beliefs and practices. The emergence of digital communication and artificial intelligence has generated both opportunities and challenges in numerous civilizations. Technology aids in conserving endangered languages, oral traditions, and historical objects. Conversely, it presents the danger of cultural homogenization, wherein international cultural standards may eclipse distinctive traditions. Artificial intelligence assists scholars in evaluating these processes, offering a nuanced perspective on the interaction between tradition and innovation.

Utilizing AI, anthropologists and cultural sociologists can acquire significant insights into the changing dynamics of human societies. This augments academic comprehension and advises policymakers, educators, and cultural institutions in their endeavors to foster cultural preservation, inclusion, and adaptation in an increasingly interconnected globe.

1.4 Public health

In public health and economics, Artificial Intelligence (AI) has demonstrated significant efficacy in analyzing the influence of social, economic, and environmental determinants on health and behavior. Through the analysis of extensive data from various sources, including online platforms, electronic health records, and socioeconomic indicators, AI facilitates the identification of intricate correlations and patterns that were previously challenging to discern. This potential has significant implications for mitigating health inequities, influencing public policy, and enhancing overall social well-being.

A notable application of AI in public health is its function in examining the impact of social variables on mental health outcomes. AI-driven systems can examine data from social media platforms to determine the correlation between economic position, employment conditions, educational attainment, and mental health disorders like anxiety and depression. Recent research indicates that economic instability, especially among younger demographics, is strongly correlated with the increasing prevalence of mental health disorders. By analyzing textual, sentiment, and

behavioral data from platforms like Twitter and Reddit, AI may identify nuanced changes in emotional expression and psychological suffering, offering real-time insights into public mental health trends (Lynne Carter, 2020, p. 81).

Furthermore, AI's capacity to evaluate multimodal data—comprising photos, videos, and geospatial information—provides a comprehensive perspective on the interplay between socioeconomic determinants and health habits. Machine learning algorithms may amalgamate data from metropolitan settings, including housing quality, healthcare availability, and pollution levels, to evaluate their collective influence on physical and mental health. These findings facilitate targeted interventions, including distributing mental health resources to marginalized groups and formulating urban policies that enhance well-being.

Artificial intelligence is crucial in identifying vulnerable populations and forecasting future public health issues. By examining trends in digital behavior and economic indicators, AI systems can predict the possible proliferation of health issues and the societal repercussions of economic recessions. During economic recessions, AI models have been utilized to forecast rises in suicide rates, substance addiction, and chronic stress, enabling governments and healthcare providers to implement preventive measures proactively.

Moreover, AI enhances the assessment of public health initiatives and policies. Researchers can assess the efficacy of programs designed to enhance mental health awareness or diminish the stigma associated with mental illness by monitoring internet debates and public sentiment. Sentiment analysis can determine if ads advocating for accessible mental healthcare connect with the target audience, offering meaningful insights to legislators.

Incorporating AI into public health research signifies a fundamental transformation in our approach to intricate health and economic issues. By elucidating the complex relationships between socioeconomic determinants and health outcomes, AI enhances scholarly comprehension and equips policymakers to formulate data-driven strategies that promote healthier and more equal societies.

2. Challenges Associated with Artificial Intelligence in Understanding the Human

Despite artificial intelligence's (AI) significant benefits, several challenges hinder its ability to comprehend human emotions and complex behavior fully. AI primarily relies on quantitative data and logical algorithms, making it challenging to grasp human existence's nuanced, intangible aspects, such as love, anger, sadness, and joy—emotions that defy reduction into fixed numbers or rigid data points.

2.1 Cultural and Spiritual Experiences

One of the primary challenges lies in AI's inability to "understand" or "interpret" deeply human experiences, such as cultural traditions, religious beliefs, and personal attitudes. These experiences

are abstract ideas and deeply rooted in historical, social, and emotional contexts that require a nuanced understanding. For example, in studies of religion and spirituality, religious beliefs often represent profound, personal experiences shaped by centuries of cultural evolution and spiritual growth. AI, however, struggles to interpret these beliefs meaningfully.

For instance, spiritual practices such as meditation, prayer, or communal rituals vary widely across cultures and carry symbolic meanings that cannot be directly translated into digital formats. Understanding such practices requires an awareness of the historical and cultural factors that have shaped them. (Mohammed Abdullah, 2018p. 45) highlights this limitation by noting that “artificial intelligence has great difficulty in imitating the human spirit because it does not deal with the spiritual and emotional dimension of human experience.” This is a fundamental limitation, as spirituality and cultural traditions are key to many people's identity and worldview, aspects that AI cannot replicate or comprehend fully.

Moreover, cultural practices are often fluid and adaptive, shaped by changing societal norms and personal interpretations. AI systems, designed to process static datasets, cannot quickly adapt to this dynamic nature. Even with advanced machine learning algorithms, the depth of emotional resonance and historical knowledge required to truly understand these aspects remains beyond AI's reach.

2.2 Psychological and Social Interactions

Given how much it affects human behavior, the interplay between psychological and social elements is a considerable obstacle. In contrast to robots, human judgments and behaviors are rarely motivated solely by logic or rationality. Rather, they are the outcome of a complicated interaction between several factors, such as social interactions, emotional states, and prior experiences. Because of this complexity, it is especially difficult to comprehend and analyze human behavior.

For example, a person's personality and decision-making processes are greatly influenced by their early experiences. A healthy, self-assured, and resilient personality can be developed in a caring setting marked by emotional support and stability. However, in maturity, emotional difficulties or dysfunctional behavior may result from traumatic experiences like abuse, neglect, or instability. These formative experiences significantly impact how people view the world, resolve disputes, and make choices in challenging circumstances.

Another important component of this dynamic is social issues. For instance, cultural settings greatly influence people's norms, values, and beliefs about decisions. Certain cultures strongly emphasize individualism, which encourages self-reliance and independent judgment. Others prioritize collectivism, where the demands of the community or group frequently influence decisions.

Whether explicit or implicit, social standards define what is acceptable or unacceptable, changing how others react to comparable situations.

Interpersonal relationships also make a big difference. Relationships with friends, family, and coworkers affect daily decisions and form attitudes. For instance, someone who is upbeat and supportive of people is likelier to welcome innovation or take measured risks. On the other hand, hesitancy, failure-related dread, or disengagement can result from a socially unfavorable or critical setting.

In the end, these social and psychological elements—which are subjective by nature—interact differently in every person. They influence how individuals view dangers, control their emotions, and tackle difficulties. A multifaceted approach incorporating ideas from psychology, sociology, and even anthropology is necessary to comprehend these dynamics and the complexity of human behavior fully.

3. Artificial Intelligence in Anthropology and Cultural Studies

Despite AI's challenges, its potential can be significantly exploited in studying and analyzing human cultures, especially with accelerating social developments. In anthropology, AI can contribute to understanding the evolution of societies over time and analyzing the impact of modern digital cultures on social identity and multiple cultural identities.

One of the most prominent applications is using artificial intelligence techniques to analyze ancient cultural texts, such as sacred books or classical literature. These tools help extract complex linguistic and intellectual patterns that may be difficult for a human researcher to observe easily. For example, AI enables us to discover hidden connections between ancient texts, contributing to our understanding of ancient cultures (Omar Al-Sharif, 2020, p. 102).

Machine learning techniques have advanced in studying dead or ancient languages, such as cuneiform in Mesopotamian civilizations or hieroglyphics in ancient Egypt. For example, a team of researchers at the University of Oxford used artificial intelligence to analyze Sumerian cuneiform texts, resulting in decipherers that had been obscure for decades. Google's DeepMind project has also made progress in translating ancient Egyptian texts using advanced neural networks. (Chris Roth, 2017, p. 19)

Artificial intelligence is transforming the understanding of ancient cultures by aiding in the analysis of historical data and revealing hidden aspects of these societies. American anthropologist Timothy Earle highlighted AI's ability to examine economic and political relationships in ancient civilizations through excavation and archaeological data.

Additionally, AI is useful for studying contemporary digital cultures, such as social networks and their influence on identity. Researchers at MIT employed AI to analyze millions of social media posts to investigate how technology spreads and impacts social values.

In conclusion, AI serves as a crucial tool in cultural studies, enabling deeper exploration of both ancient and modern societies in unprecedented ways

.4: Future Potential: Artificial Intelligence as a Complementary Tool for Humans

Despite its limitations in understanding the human soul and its emotional complexities, AI offers limitless possibilities for analyzing human societies in advanced and holistic ways. In the future, AI could become a tool complementary to human capabilities in the social sciences, not replacing researchers but enhancing their ability to process big data and understand social patterns beyond traditional human cognition.

4.1 Using Artificial Intelligence in the Study of Social Identities

Artificial intelligence (AI), for instance, has shown itself to be a potent instrument in studying the intricate relationships between social identities and how political and economic changes impact them. AI methods have been used to obtain profound insights into the complex relationships between migrants and host communities in the setting of mass human displacement, such as the Syrian refugee crisis and its notable influx into Europe. AI has made it possible for researchers to find patterns and trends that would have been nearly impossible to detect manually by processing enormous amounts of data, including more than a million personal stories, narratives, and experiences shared on social media platforms and online forums (Maria Anderson, 2022, p. 121).

This extensive study has shed important light on how refugees adjust to and fit in with their host societies. For example, it clarifies refugees' difficulties, including linguistic hurdles, cultural disparities, and unstable economic conditions. It also looks at how people overcome these challenges, including relying on diaspora networks, participating in cultural exchange initiatives, and starting their businesses. The information also emphasizes the adverse psychological and emotional effects of displacement, including identity crises and the sense of loss that comes with leaving behind comfortable surroundings.

At the same time, AI analysis broadens its scope to include how migration affects host cultures. AI has assisted in detecting changes in public opinion, differing acceptance or resistance, and creating new cultural identities influenced by multicultural exchanges by analyzing social media debates. For instance, hybrid cultural practices have resulted from interactions between local communities and migrants, changing conventional norms and values in beneficial and problematic ways. The results also highlight how economic shifts, like adjustments in labor markets, impact public attitudes and policy as refugees compete or contribute to local economies.

AI-based research has significantly aided policymakers by providing evidence-based suggestions and insights. This has led to strategies to combat bigotry, promote social cohesion, and develop tailored integration plans for host and refugee communities. AI's ability to handle unstructured data

allows researchers to consider complex experiences, ensuring policies accurately represent the diverse range of people affected by migration. This technology links vast datasets and provides valuable insights into the relationship between migration, social identity, and cultural change, enabling societies to effectively manage the opportunities and challenges of international migration.

4.2 Real-World Algerian Examples

Artificial intelligence (AI) holds great promise for revolutionizing our comprehension of Algeria's social dynamics and changes. Finding answers to some of the most important societal problems is made feasible by utilizing AI's capacity to evaluate enormous volumes of data and identify trends. Here are three significant instances of how AI might be used to comprehend better and respond to Algeria's social changes:

4.2.1 Cultural Identity and Internal Migration

Algeria has had much internal migration, especially from rural areas to big cities like Constantine, Oran, and Algiers. These cities' social and cultural fabric has undergone significant changes due to the rural-to-urban migration, resulting in a fusion of traditional and modern lives. By examining big datasets about housing, employment, digital activity, and demographic trends, artificial intelligence (AI) can be extremely helpful in researching these changes.

AI-driven GIS can track migration trends and assess how migrants adjust to urban life by analyzing employment, educational achievement, and social integration data. It can also detect changes in cultural identity through digital footprints, such as social media activity and online conduct. This approach can reveal difficulties faced by rural migrants, such as social isolation, housing shortages, and adjusting to urban standards, as well as how cultural diversity is handled in urban settings.

Artificial intelligence (AI) can also assist policymakers in addressing problems like congestion and poor urban design by using predictive models to foresee future migration trends. This makes it possible to implement more successful urban development plans that promote social cohesion while honoring and incorporating the cultural identities of rural communities.

4.2.2 Cultural Shifts and Youth

With over **70%** of its population under 35, Algeria is a young nation defined by its youth. The growth of social media sites like Facebook, Instagram, TikTok, and Twitter has established a new digital environment where cultural values and national identity are communicated, discussed, and changed. This digital activity can be analyzed using AI technology to comprehend how Algerian youth's social and cultural values are changing. (Omar Al-Sharif, 2020, p. 89).

Natural language processing (NLP) technologies can process large social media posts, comments, and hashtags to find new trends, values, and issues among youth. AI, for instance, can identify changes in opinions regarding matters like politics, religion, gender roles, and the environment. It can

also draw attention to how Algerian adolescents are impacted by global digital culture and how it interacts with conventional cultural standards.

AI can investigate how young people view their national identity in a globalized, digitalized world by examining patterns of internet participation. Through social media, are they rediscovering and reaffirming regional customs or adopting more universal values? To close the digital divide and guarantee equitable cultural involvement, AI can also detect regional differences in young participation in national conversations and their effects on access to digital platforms.

4.2.3 Economic Transitions' Effects

Oil and gas revenues have long been a major part of Algeria's economy. In response to the recent drop in oil prices, the government has implemented economic diversification measures to lessen this reliance. AI can assist in a thorough analysis of these shifts' significant effects on regional growth, income distribution, and social class structures.

Economic models driven by artificial intelligence can analyze employment and income data from Algeria's many areas to see how diversification policies impact different socioeconomic groups. Machine learning algorithms, for example, can examine trends in creating and losing jobs in industries like manufacturing, services, and agriculture. This may result in socioeconomic inequities since it may show which areas most benefit from economic diversification while others are left behind.

Furthermore, by examining how these policies affect social mobility, AI can assist in identifying the obstacles that keep particular groups—like women, people living in rural areas, or low-income families—from taking advantage of new economic opportunities. AI can offer suggestions for enhancing inclusiveness in economic development initiatives by evaluating training, education, and employment placement data.

AI can also analyze the broader social effects of economic developments, including modifications to lifestyle, consumer behavior, and the formation of new class identities. For instance, traditional social structures may give way to new ones when areas grow more urbanized or industrialized, creating opportunities and difficulties for preserving social cohesiveness.

5. AI Tool for Researchers

Researchers in the social sciences and humanities are increasingly interested in AI technologies due to their ability to analyze data faster and more accurately. Nevertheless, as in other fields, AI is still seen as complementary to human capabilities and relied on to enhance rather than replace traditional research. In this context, we will show how researchers are leveraging AI in diverse fields, with a focus on its applications in Algeria.

5.1 Analyse historical texts

Historical documents in Algeria, especially those related to the period of French colonization, are valuable sources that contain important information for understanding the country's political and social history. However, many of these documents are handwritten or in outdated formats, making their analysis complex and time-consuming.

Optical character recognition (OCR) technologies solve this problem by digitizing handwritten or ancient texts, making it easier to convert them into formulas that can be analyzed using computer programs. Through machine learning, AI can classify these documents and extract historical and social patterns that may be subtle or unclear to researchers.

For example, AI can be used to analyze letters and documents written by French colonists or even administrative reports written during the colonial period to understand the influences of French policies in Algeria. These documents often contain accurate information about community organization, economic relations, and racial segregation practices, which can be explored through modern textual analysis techniques.

5.2 Sustainable Urban Development

In light of the rapid urbanization of major cities in Algeria, such as Algiers and Oran, it has become necessary to find innovative solutions to the problems of overpopulation, deterioration of infrastructure, and pressure on natural resources. AI can play an important role in sustainable urban planning through big data on traffic, population growth, and natural resource distribution.

For example, AI technologies can contribute to developing city simulations that help understand traffic flow at different times of the day and analyze the social patterns associated with them, such as when to go to work or study. Based on these analyses, informed decisions can be made on improving the road network, planning public transport, and increasing city green spaces.

In addition, AI can help improve energy consumption in cities by analyzing environmental data and predicting electricity and water demand in different neighborhoods.

7- Conclusion

Artificial Intelligence (AI) is a powerful tool in the development of social sciences, helping to analyze big data and discover social patterns. Automated data analysis provides accuracy and speed of discovery. However, understanding the spiritual and emotional aspects of human beings and cultural interactions requires human interpretation. AI acts as a complementary tool for researchers, collecting and analyzing data quickly and accurately, but a deep understanding of the analyses comes from human interpretation. Cultures and societies rely on cultural symbols and meanings that are difficult for AI to understand with only quantitative data. AI can evolve in the future to address more complex concepts and increase the precision of analysis, but it will always need human

guidance to understand the human mindset. Thus, human interpretation must remain an essential part of social research.

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