Cyber Laws And Emerging Use Of Artificial Intelligence: View From Sociological Perspectives

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Abstract:
Interest in applying sociological tools to analyse the social nature, antecedents and consequences of artificial intelligence (AI) has been rekindled in recent years as a result of the prevalent use of AI technologies in a wide variety of social domains, ranging from education to security, from retail to healthcare, from transport to law enforcement practice. Several legal issues arise as artificial intelligence (AI) becomes more integrated into legal practice and Sociological research. These include questions about accountability for decisions made by AI systems, data protection and privacy concerns, and the potential impact of AI on legal professions. After of amid COVID-19 pandemic impact, cybercrime has become an extremely money-spinning industry. The need for socio-legal professionals to understand the legal frameworks to protect data and prevent cyberattacks is increasing with public awareness of cybersecurity dangers through sociological understanding. Cybercrime today involves a wide range of offences, and the judicial system faces new, unaddressed challenges are still unaddressed.

Key Words: AI, Cyber Security, Legal-Ethical consideration, Sociological Understanding.

Introduction:
In most social descriptions of AI from the 1980s and 1990s, it is viewed as a system of scientific knowledge and skill that aims to make machines perform tasks that people can perform. What I refer to as the "scientific AI" analytical perspective informs these investigations. A few of them deal with the issue of how AI research is a socially constructed activity because it is carried out by social actors (AI researchers) in social surroundings (universities, research institutes, corporate research labs, etc.). Others investigate how artificial intelligence systems shape society. Others look more widely at how AI affects human-machine relationships and the nature of human knowledge.

The intellectual traditions of science and technology studies (STS), human-computer interaction, the sociology of knowledge, and the sociology of science have all inspired this body of work. According to Bloomfield (1987), who sees science as a collection of subjective knowledge rather than objective facts, social and cultural aspects influence AI research. Determining what these conditioning elements are and how they influence AI research and development is therefore necessary to comprehend it. He contends that "thought styles," or socially constructed "beliefs and convictions" that are common in a scientific discipline, are how these exogenous variables influence AI research (Bloomfield, 1987, p. 98), and that one way to comprehend the social logic of AI research is to analyze the prevalent "thought style" that the majority of AI researchers share. For instance, Bloomfield looks at AI development in the US following World War II and shows how three major "thought styles"—imminent breakthrough expectations, faith in the universality of computer programs, and technological determinism—shaped the direction and results of AI research during this time.

Review of Literatures:

Fleck (1987) delves into the reasons behind the non-purely scientific nature of AI research, examining how power dynamics within the field and between AI as a burgeoning scientific discipline and the social and scientific establishments it challenges impact this process. Using the post-1945 US and UK AI development as an example, Fleck also demonstrates how influential individuals in the field, including McCarthy, Minsky, Simon, and Newell in the US and Michie in the UK, had nearly total control over decisions about important appointments and the direction of the field's development. But when it came to competing for research funding outside of the AI area, experts in more established fields like computer science and mathematics would have greater influence. Thus, scientific endeavors as well as competition between AI and other disciplines for research resources—or, to use Bourdieu's terminology—power conflicts between various scientific areas within the broader economic and political spheres all influenced AI research.
Similar to Bloomfield and Fleck, Forsythe (1993a, 1993b) examines how "nontechnical factors" (Forsythe, 1993a, p. 460) impact AI research, with a particular emphasis on how AI systems represent and replicate the cultural values of their creators. She argues that AI developers incorporate preexisting attitudes, beliefs, and assumptions into their designs, whether they realize it or not. Thus, AI systems are far from neutral and value-free. Systems that are purportedly "scientific" but are actually highly subjective and value-laden can (re)affirm and reinforce values and views that are consistent with the developers' own. Not much has changed since Forsythe's results.

The regular delivery of biased and/or discriminatory outcomes by AI systems has been the subject of significant discussion (Obermeyer, Powers, Vogeli, & Mullainathan, 2019; Sap, Card, Gabriel, Choi, & Smith, 2019). Forsythe's research was published almost thirty years ago, so its significance isn't so much in its particular conclusions as it is in raising the question, "Why do these problems, exposed nearly three decades ago, still persist today?" According to some sociologists, artificial intelligence (AI) is both a socially constituted business and socially constitutive in that it may act out social roles, carry out social behaviors, and establish social relationships when it is used in a social setting. Examining how AI systems "penetrate and transform social institutions" (Schwartz, 1989, p. 180) and so "[redefine] social life" (Schwartz, 1989, p. 199) is hence a crucial challenge for sociologists studying AI.

In a highly referenced study, Woolgar (1985) proposes that rejecting the notion that humans and computers are fundamentally different in their social capacities is one way to explain the social nature of AI. Rejecting this idea would open the door for discussion of the social nature of AI systems. According to Woolgar (1985, p. 565), this idea is constructed by scientific and commercial AI circles to advance the "marketability" of their research and business, not because it has any compelling sociological foundation. Woolgar then calls for the creation of a sociology of machines to examine how AI systems behave like human social actors in order to establish social relationships and create social realities. This perspective, which is similar to actor-network theory, implies that early sociological research on artificial intelligence (AI) viewed the technology largely as a technoscientific advancement.

A third line of inquiry in the literature pertaining to "scientific AI" delves deeper into the matter of AI's consequences for human society and the relationship between humans and machines. In discussing how AI is changing the nature of knowledge, Bloomfield (1988) refers to the sociology of knowledge. Although intelligent robots were now contributing more and more to the sum of knowledge, it had traditionally been believed that human intellectual processes created it. Bloomfield suggests that AI developers can improve their systems' capacity to generate knowledge by incorporating social science and humanities research on the nature of knowledge and the process of knowledge production, rather than making a judgment about the superiority of AI-generated knowledge over human-generated knowledge.

Some experts are less convinced about AI's purported capacity to mimic human behavior. The social inadequacy of AI systems is a recurring problem. Collins (1990, 2018), for example, addresses the question, "Can machines be as intelligent as humans?" and argues that while intelligent machines can show remarkable abilities to perform mechanical tasks like pattern recognition, they are not capable of "seeing" and "understanding" contexts, which is a fundamental component of human intelligence. Thus, it is impossible to claim that intelligent machines truly possess human intelligence. According to Suchman (1987, 2007, 2011), robots "act" mechanically as a result of predetermined algorithms, while people "study" social contexts before behaving. For this reason, Suchman rejects the notion that robots may be trained to behave like humans. Robots will never be able to act in ways that are similar to how humans would act in the same circumstances because they are unable to adapt their algorithms or the actions that follow to account for changes in the environment.

The aforementioned studies all analyze "AI" as a scientific field of study or as a body of scientific knowledge, despite their differing concerns. This suggests that the early sociological intervention in AI focused more on the technology's scientific merits than any other aspect of it. While this analysis is both grounded in and limited by the material details of the subject of study, it also transcends them. It's also important to note that, despite the ongoing social discussion regarding AI's intelligence, there doesn't seem to be as much interest in examining the ways in which non-scientific elements influence AI research and the resulting effects since the 1990s.

Sociologists should, however, pay more attention to issues like how corporations are funding and influencing AI research, how the AI community has resisted this influence (Belfield, 2020; Lardieri, 2018; Wong, 2019), and the implications of this power struggle for AI research. Not just AI and scientific sociologists, but also labor and job sociologists, political economy sociologists, cultural and activism sociologists, and so on, should pay them more attention. Sociological research has much to offer in the area of artificial intelligence (AI) and cyber legislation. Sociological analysis of this relationship entails examining how legal frameworks are changing in response to the quick advances in AI technology and the social effects of these changes. To examine the cultural creation of AI, several scholars incorporate viewpoints from cultural sociology, media and cultural studies, and social construction of technology (Eynon & Young, 2021; Natale & Ballatore, 2020; Šabanović, 2014).

Sociological Understanding:
Their main concern is how various groups use various cultural materials and customs to create AI narratives that serve to further their own objectives. According to Eynon and Young (2021, p. 4), who have studied how academics, business professionals, and legislators define educational AI, various groups have "diverging interpretations of AI" and frequently define and characterize the technology in ways that advance the objectives and activities of their respective disciplines. These stakeholders aim to influence how educational AI is utilized, sponsored, controlled, and commercialized over time

by intentionally "framing" the technology. It is not merely a coincidence that they have various perspectives on the technology.
Here's a detailed view on this topic:

1. Legal Frameworks and AI Regulation:

Adapting to Rapid Change: Traditional legal frameworks often struggle to keep pace with the rapid advancements in AI technology. From a sociological perspective, this lag can lead to a range of issues, including insufficient protection for individuals and businesses and potential for misuse of AI technologies. The need for adaptive legal frameworks is crucial to address these challenges effectively.

Balancing Innovation and Regulation: Societies must find a balance between fostering innovation and protecting public interests. Overly restrictive laws might stifle technological advancement, while overly lenient regulations could lead to unethical practices or unintended consequences. Sociologists study how different societies approach this balance and the implications for social equity and economic development.

2. Ethical Considerations and AI

Bias and Fairness: AI systems can perpetuate or exacerbate existing biases if not carefully managed. Sociologists examine how biases embedded in AI algorithms reflect and reinforce social inequalities. They also study the implications for marginalized groups and how laws can address these issues to promote fairness and justice.

Surveillance and Privacy: AI technologies often enable enhanced surveillance capabilities. Sociologists analyze how increased surveillance affects social behavior, privacy norms, and individual freedoms. Legal frameworks must address these concerns to protect citizens' rights while enabling technological advancement.

3. Impact on Employment and Labor

Job Displacement: AI has the potential to disrupt labor markets by automating jobs and changing the nature of work. Sociologists explore the socio-economic impacts of these changes, including job displacement, shifts in job requirements, and the broader implications for workers' rights and economic stability.

New Opportunities and Skills: On the flip side, AI also creates new opportunities and demands for different skill sets. Sociological perspectives help in understanding how societies can adapt to these changes, including the role of education and training in preparing the workforce for an AI-driven economy.

4. Social and Cultural Impacts

Shifts in Power Dynamics: The deployment of AI can shift power dynamics within societies. For instance, entities that control advanced AI technologies might gain significant advantages, potentially leading to increased concentration of power. Sociologists investigate how these shifts affect social structures and inequalities.

Public Perception and Trust: The way AI is perceived by the public can influence its adoption and integration into daily life. Sociological research often focuses on public attitudes towards AI, including fears, misconceptions, and trust issues. Understanding these perceptions is crucial for developing effective and socially acceptable AI policies.

5. Global Perspectives and Cooperation

International Regulations: AI technology transcends national borders, creating challenges for international regulation. Sociologists study how different countries and cultures approach AI regulation and the potential for international cooperation to address global challenges.

Cultural Variations: The impact of AI and cyber laws can vary significantly across different cultures and societies. Sociologists examine how cultural values and norms shape the development and implementation of AI policies and how these policies, in turn, affect different cultural contexts.

Intellectual Property and AI: The use of AI in the creation and management of intellectual property raises a number of legal questions, including issues around ownership, infringement, and licensing. This topic could explore the legal frameworks for managing intellectual property in AI, including issues around copyright, patents, and trademarks. Other IPR-related topics for AI concerns can be: -
O The Use of AI in Copyright Infringement Detection
o Copyright Issues for AI-Generated Works
o Fair Use and AI-Generated Works
o Liability for Infringement by AI

o Regulation of AI in Copyright Licensing

Conclusion:

From a sociological perspective, the evolving landscape of cyber laws and AI presents both opportunities and challenges. Understanding the social implications of AI and the effectiveness of legal frameworks in addressing these issues is crucial for creating a balanced and equitable technological future. Sociologists play a key role in analyzing these dynamics and providing insights that can guide policymakers, technologists, and society at large in navigating the complexities of AI and cyber law.

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