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Artificial intelligence as a social institution: Structures, norms and consequences

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Abstract
This paper conceptualizes Artificial Intelligence (AI) as an emerging social institution rather than a neutral technological tool arguing that AI increasingly performs institutional functions by structuring norms, decision-making processes and power relations in contemporary societies. Drawing on sociological theories of institutions and power alongside critical scholarship on digital capitalism and algorithmic governance, this paper situates AI within broader social, political and economic structures. It demonstrates how AI systems have become embedded in state governance, market institutions and everyday social practices where they regulate access to resources, classify populations and legitimize particular forms of knowledge and authority. The paper critically examines how algorithmic norms and values are socially embedded often reproducing existing inequalities related to class, caste, race, gender and geography under the appearance of objectivity and efficiency. Particular attention is given to the role of AI in reshaping labour relations through automation and algorithmic management intensifying precarity while concentrating power within corporate and bureaucratic institutions. The analysis further highlights the contradictory nature of AI as a social institution showing how it simultaneously deepens social stratification and generates new forms of resistance, contestation and ethical debate. By foregrounding AI's institutional character, this paper contributes to the sociology of institutions, technology and power emphasizing that the social consequences of AI depend not on technological design alone but on the regulatory frameworks, political struggles and collective choices that shape its governance. The study concludes by calling for sociologically informed policy interventions and future empirical research that critically interrogate AI's role in reproducing or transforming social inequalities in the digital age.

Keywords: Artificial intelligence, social institutions, algorithmic power, digital inequality, platform capitalism, sociological theory

Introduction

Artificial Intelligence now sits quietly inside everyday life shaping how decisions are made, who is seen, and who is ignored, and this reach goes far beyond its narrow description as software or automated tools. That matters. It forces sociology to treat AI not as a clever machine but as something social, built inside histories of power, rules and habits that already shape institutions and daily routines (Castells, 2010; Noble, 2018) [3, 10]. Once you look at AI this way, it begins to resemble a social institution not because it replaces the state or the market but because it starts doing similar work organizing behaviour, setting limits and quietly deciding what counts and what does not (Giddens, 1984) [9]. This shift changes the kind of questions sociologists need to ask. A lot changes here. Instead of asking whether algorithms are accurate, the focus turns to how they gain trust, how their decisions come to feel normal and how certain kinds of knowledge get treated as more valid than others, often wrapped in the language of efficiency and rational choice (Weber, 1978) [16]. The institutional presence of AI shows up in ordinary places. It appears in state systems through welfare screening, biometric identification and predictive policing; it runs through markets via automated hiring, credit scores and platform-based labour control; and it shapes social life through recommendation systems, content ranking and everyday surveillance that few people fully understand (Zuboff, 2019; Tufekci, 2017) [14, 17]. Over time, as these systems are repeated and relied upon they begin to act like authorities quietly guiding access to jobs, benefits, visibility and social worth. Power accumulates here. The problem this article takes up grows from a clear gap between how fast AI systems are spreading and how slowly their institutional role is being studied in sociology. Public debate often treats AI as a matter of innovation or ethics, sometimes efficiency which keeps attention away from how these systems carry old biases forward and build new forms of control into routine decision-making (Bourdieu, 1991; Noble, 2018) [1, 10]. This paper argues that AI should be taken seriously as an institution in its own right not just something institutions use. It produces norms, shapes conduct and rearranges social relations through classification, prediction and ranking, whether anyone votes for it or not. That point matters. Seeing AI this way helps move past simple stories about technology driving change on its own and instead places it firmly inside the governance of modern societies. The study works toward this aim with a clear focus like to build a sociological frame for understanding AI as an institution, to trace how it gains authority across state, market and social life, and to examine what this means for inequality, surveillance, work and democratic space as these systems settle in. The approach is theoretical and interpretive grounded in existing work on institutions, power and technology, rather than new data collection. The paper unfolds in six sections. This opening sets the scene. The next section develops the theoretical base. After that comes an examination of structural arrangements followed by a closer look at norms and regulation, then the social consequences. The final section steps back and asks what all this means for sociology going forward.

Theoretical Framework and Conceptual Foundations

The idea of a social institution sits at the core of sociology because it points to patterns that last, rules people follow

without always noticing and routines that steady social life, and this is exactly the angle from which Artificial Intelligence needs to be rethought. Not as software. Something more settled than that. Institutions were never just buildings or offices in classical sociology; for Durkheim they were social facts, outside the individual, pressing down through shared rules and moral force, shaping action even when no one is giving direct orders, which feels uncomfortably close to how algorithmic systems now guide behaviour at a distance (Durkheim, 1982) [5]. Parsons pushed this further by treating institutions as systems that keep society running by managing goals, adjustment, and coordination, a view that makes it easier to see AI quietly taking on such work across governance, markets and communication often without public debate (Parsons, 1951) [11]. Giddens complicates the picture and helpfully so, by showing that institutions are both made by action and make action possible which fits AI rather well since these systems are designed by people yet, once settled, start shaping everyday choices through repeated routine decisions that few users ever question (Giddens, 1984) [9]. This is where newer institutional theory matters. Technologies are not neutral add-ons. They are built into organizations, laws and habits, and they carry power with them (Scott, 2014) [12]. AI gains authority not only because it works fast but because it matches cultural beliefs about efficiency, objectivity and control. That belief travels easily. Weber's account of rationalization sharpens the point showing how modern power prefers calculation, procedure and formal rules, all of which AI intensifies by turning messy social life into scores, categories and predictions that feel clean and final (Weber, 1978) [16]. Algorithms appear impartial. They rarely are. What gets hidden is the social judgment already baked into their design, the values that decide what counts as risk, merit or failure, and whose lives are sorted first (Bourdieu, 1991) [1]. Seen this way, AI operates as a rule-making system quietly setting thresholds and priorities that govern access to welfare, jobs, credit and security, often without appeal or explanation (Noble, 2018) [10]. Over time, these rules stop looking like choices and start looking like facts. Compliance follows. The normative force of AI matters because algorithms do more than calculate; they repeat and spread ideas about productivity, worth and deviance until these ideas feel natural. Trust grows here fed by expert talk, technical complexity, and institutional backing producing a kind of algorithmic legitimacy that rests on the belief that machines decide better than people (Zuboff, 2019) [17]. That trust is fragile. It cracks when bias shows up or when no one can be held responsible, a problem that keeps returning in critiques of digital governance (Tufekci, 2017) [14]. Power, in AI systems, works through authority without visibility. That should worry sociology. Treating AI as a social institution helps bring together older theories of order and newer debates about digital power showing how rules, norms and authority are being rearranged under technological governance. AI is no longer just inside institutions. It is becoming one.

Structural Dimensions of Artificial Intelligence

The structure of Artificial Intelligence comes into view only when it is treated as part of the institutions that already run social life not as a stand-alone machine sitting outside society. Look at the state first. AI now works inside welfare offices, border systems, policing software, city planning tools and biometric databases, doing work that once belonged to clerks, inspectors and street-level officials sorting people, ranking risks and deciding who gets flagged and who passes through (Eubanks, 2018; Zuboff, 2019) [6, 17]. This shift matters. What we see here is not innovation but an extension of bureaucratic logic where decisions are standardized and pushed through automated routines strengthening rational-legal authority while making it harder to see how or why a decision was reached (Weber, 1978) [16]. Markets follow a similar pattern, though with sharper edges. AI sits at the centre of platform capitalism, steering production and consumption through constant tracking, prediction and algorithmic management, especially in gig work where labour is watched, scored and adjusted in real time (Srnicek, 2017) [13]. Control is exercised quietly. Companies use AI to predict behaviour, sort job applicants, manage workers and squeeze efficiency from every interaction,often blurring the line between coordination and domination (Zuboff, 2019) [17]. At the heart of both state and market systems lies data. Data works like an institutional resource, even a form of social capital because it allows prediction and control, yet its collection and use are shaped by uneven power, with states and corporations holding most of the tools and access (Couldry & Mejias, 2019) [4]. This uneven ownership turns everyday life into a raw material while those producing the data have little say in how it is used. The gap widens at the global level. AI development is concentrated in a small number of powerful states and corporations mostly in the Global North, leaving many societies positioned as data suppliers, testing grounds, or markets rather than decision-makers (Fuchs, 2020) [8]. Regulation struggles to keep up. Corporate actors often set the standards while weaker states find it hard to protect data or control algorithmic systems within their borders (Scott, 2014) [12]. Inequality settles in. These structural arrangements feed stratification along class, race, caste and geography, as AI systems distribute benefits and risks unevenly. Infrastructure matters here. Data centres, platforms, algorithms and surveillance tools decide who is visible, who is legible to institutions and who falls out of the picture altogether (Noble, 2018) [10]. Bias does not arrive by accident. It is carried forward through automated systems that make inequality look neutral and technical. This is the core point. AI's social effects cannot be separated from the institutional structures that shape its design and use, which is why it must be studied as part of wider systems of power, governance and economy not as technology alone.

Norms, Values and Social Regulation in AI Systems

Artificial Intelligence now sits at the centre of how social life is regulated not just because it runs code but because it quietly sets norms, spreads values and claims authority over everyday decisions. This matters. From a sociological angle algorithms act like rule-makers they carry ideas about what counts as normal, risky or efficient, and they turn those ideas into instructions that guide action (Bourdieu, 1991; Noble, 2018) [1, 10]. Once in place, these rules sort people through classification systems productivity scores, credit ratings, risk flags etc. that look neutral while carrying old inequalities forward, polished by data and design (Bowker & Star, 1999) [2]. Bias does not slip in by accident. It grows out of design choices, training data and institutional goals that reflect who holds power and what outcomes are preferred (Eubanks, 2018) [6]. The result is exclusion that

works softly as some groups are watched more closely, others quietly locked out of services or opportunities with effects that follow lines of race, caste, class and gender (Noble, 2018) [10]. Ethics talk often promises neutrality and fairness. That promise distracts. By framing decisions as technical, responsibility drifts away from institutions and lands on machines making outcomes seem unavoidable rather than debatable (Weber, 1978; Zuboff, 2019) [16, 17]. Many ethics frameworks stay procedural focused on checklists and fixes while leaving the larger field of power untouched (Tufekci, 2017) [14]. Surveillance sharpens this picture. AI-driven monitoring pulls data at scale, tracks patterns, and predicts behaviour allowing institutions to observe and intervene in ways that feel constant and hard to escape (Foucault, 1977; Zuboff, 2019) [7, 17]. People adjust. They learn the scores. They play to the metrics. Discipline moves inside everyday tools blurring governance with control and making oversight feel like a condition of participation. Authority follows from this setup. It grows where technical expertise meets institutional backing and cultural trust in computation producing algorithmic authority that is hard to question because it is complex and opaque (Scott, 2014) [12]. Contestation becomes difficult. Accountability thins out as responsibility spreads across systems, firms and designers leaving harmed groups with few places to appeal (Eubanks, 2018) [6]. Power changes shape here. It works through automated sorting and prediction instead of direct orders. By fixing norms inside code, AI reshapes ideas of fairness, responsibility and legitimacy often favouring efficiency over justice. This is the crux. To understand these shifts, sociology has to keep technology, power and norms in the same frame and treat AI not as a neutral tool but as a governing force with real effects on inequality, democracy and human agency.

Social Consequences and Inequalities

The spread of Artificial Intelligence as an institutional system has reshaped social life in ways that rarely reduce inequality and more often carry it forward in new forms. This is the central problem. From a sociological view, AI tends to work by turning long-standing hierarchies into data categories and automated decisions which then look fair simply because they are produced by machines rather than people (Bourdieu, 1991; Noble, 2018) [1, 10]. Once inequality is translated into numbers, it hardens. Algorithms trained on unequal worlds absorb those patterns and send them back into society often serving institutional goals tied to profit, efficiency and control rather than social balance (Eubanks, 2018) [6]. The effects are especially clear in work and employment. Automation, algorithmic supervision and predictive systems have altered labour across sectors and not evenly. Jobs that are routine, informal or already insecure are the first to feel pressure while protections weaken and uncertainty grows (Srnicek, 2017) [13]. Platform-based work makes this shift visible like workers are watched, rated, nudged and sometimes removed by systems they cannot question while bargaining power slips away and risk is pushed onto individuals even as control stays firmly with firms (Zuboff, 2019) [17]. Inequality deepens here. Marginalized communities face sharper consequences as AI systems often act less as tools of inclusion and more as filters of exclusion. Predictive policing, credit scoring, welfare screening and facial recognition tend to increase surveillance of already vulnerable groups while limiting access to resources and mobility (Noble, 2018; Eubanks, 2018) [6, 10]. This produces a form of digital stratification where social position is managed through scores, rankings and flags that closely track existing power relations. The digital divide makes this worse. Access to devices, skills, and AI-based services is uneven, and those with fewer resources are less able to benefit from new systems while remaining fully exposed to their monitoring and regulation (van Dijk, 2020) [15]. Risk spreads downward. Reward does not. Yet this picture is not static. Resistance appears alongside control. Civil society groups, labour unions, digital rights activists and social movements increasingly question algorithmic decisions demand transparency and push regulation into a space often treated as technical and untouchable (Tufekci, 2017) [14]. These struggles matter. They show that AI is not settling smoothly into social life but becoming a site of conflict where inequality and critique grow side by side. AI, as a social institution carries contradiction at its core like it sharpens disadvantage while also opening new ground for challenge. To grasp its consequences, sociology has to step away from optimistic stories about progress and look closely at power, institutions and struggle. The future effects of AI will not be decided by code alone, but by how societies argue with it, regulate it and reshape the rules it now enforces.

Conclusion

This paper has made a simple but demanding claim that Artificial Intelligence should be treated as a social institution not just as a new piece of technology dropped into society. That shift matters. When seen this way, AI stops looking like a tool and starts looking like a system that shapes norms, steers decisions and rearranges power in everyday life. Drawing from both classical and newer sociology, the analysis showed how AI now does institutional work like sorting people, managing access to resources and giving authority to certain kinds of knowledge through algorithmic logic that feels neutral but rarely is. Across the state, the market and ordinary social spaces, AI has settled into bureaucratic and capitalist structures pushing rationalization further, widening surveillance and changing how work is organized often in ways that deepen insecurity and inequality. This is the core argument. AI does not float above society. It grows inside it. Its systems reflect existing hierarchies of class, race, caste, gender and place, even when they appear objective because they are built on data and assumptions shaped by unequal worlds. Thinking of AI as an evolving institution helps hold two things together at once that it stabilizes social order by standardizing decisions and routines, yet it also introduces new kinds of power that blur responsibility, reduce human judgment and quietly reset expectations about how life should be managed. For institutional sociology, this pushes theory into digital terrain, showing how non-human systems gain legitimacy and endurance through organizational backing and cultural trust in technology. For studies of power, it highlights how control now works less through direct force and more through prediction, classification and automated regulation. The policy stakes are clear. Ethics cannot stop at design principles or voluntary codes. They need institutional force. Governing AI as a social institution means building rules that demand transparency, protect workers, limit data extraction and reduce digital inequality while opening space for public scrutiny and participation. Responsibility has to

sit with systems, not just individuals. Looking ahead, sociology has work to do. We need close studies of how different groups live with, resist or adapt to AI, especially those already pushed to the margins. Comparative research across regions and political systems can show how AI settles differently in different contexts. Treated seriously, AI is not a side issue for sociology. It is a central one. Its social effects will be shaped not by code alone, but by struggle, regulation, and the choices societies are willing to make.

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