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# The Impact of Artificial Intelligence on Workers' Professional Identity: A Sociological Approach to Disruption and Reconfiguration

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**Abstract:**

In light of the rapid expansion of information technology, Artificial Intelligence (AI) has emerged as one of the most prominent features of digital transformation within contemporary organizations. Its impact is no longer limited to technical and productive aspects but has extended to encompass the social and symbolic dimensions of labor. In this context, professional identity emerges as one of the most vital components affected by these transformations, as it constitutes the framework through which workers construct their self-perception within the professional sphere and derive their sense of competence, belonging, and job stability. With the increasing presence of Artificial Intelligence within work environments, workers are facing new challenges related to the redefinition of their roles and professional status. This shift reflects on their professional self-representations and compels them to reconfigure their professional identities or adopt new patterns characterized by flexibility and adaptation. Accordingly, this research paper seeks to analyze the nature of the relationship between Artificial Intelligence and professional identity by understanding how AI contributes to the reconfiguration of this identity within organizations.

**Keywords:** Artificial Intelligence, Identity, Professional Identity, Role Identity, Digital Transformation.

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## INTRODUCTION

Developed nations are witnessing intense competition in the fields of information technology and industry, driven by the remarkable advancements in this domain. In modern organizations, Artificial Intelligence (AI) applications have become an indispensable necessity, as these organizations function as open systems influenced by their external environment and the various threats they encounter. The emerging trend toward adopting AI applications has facilitated the introduction of new work patterns based on automation. These intelligent systems are now capable of performing tasks that were previously the exclusive domain of human capital. Consequently, these shifts have come to encompass the content of professional roles, patterns of intra-organizational relationships, administrative problem-solving, and the enhancement of quality and efficiency, as evidenced by previous research on the significance of these applications in business organizations.

### Statement of the Problem

Amidst the rapid transformations characterizing the contemporary world, Artificial Intelligence has emerged as a primary output of the digital revolution. Its role is no longer confined to optimizing technical performance within organizations; rather, it has extended to reshape the nature of work across various dimensions, including social and symbolic aspects. In this context, professional identity emerges as a fundamental sociological concept affected by these shifts, serving as the framework through which individuals construct their self-perception within the professional sphere and determine their status and sense of competence and belonging.

However, the integration of Artificial Intelligence into modern work environments has induced a state of disruption in workers' representations of their professional identity. This is a result of the redistribution of roles, the changing nature of tasks, and the increasing reliance on intelligent systems—factors that raise profound questions regarding the future of the professional self in light of this transformation. Workers find themselves facing challenges related to redefining their roles and status within the organization, prompting

them to revise their professional self-conceptions, either toward a sense of threat and instability or toward adaptation and reconstruction.

Despite the proliferation of studies addressing the impact of Artificial Intelligence on performance and productivity, its influence on professional identity remains under-researched, particularly from a sociological perspective that seeks to understand the symbolic and moral dimensions of labor.

Accordingly, the problem of this study is defined by the attempt to understand the nature of the relationship between Artificial Intelligence and professional identity, and to reveal how AI contributes to its reconfiguration and reconstruction within contemporary organizations.

Consequently, we pose the following primary research question:

- ✓ **What is the nature of the impact of Artificial Intelligence on the professional identity of workers in terms of disruption and reconfiguration within organizations?**

From this primary question, the following sub-questions emerge:

- ✓ How does Artificial Intelligence contribute to creating a disruption in the professional identity of workers?
- ✓ How does Artificial Intelligence affect workers' perceptions of their professional selves in terms of competence and belonging?
- ✓ How does Artificial Intelligence contribute to the reconfiguration of the professional identity of workers?

To answer these questions, we have divided the study into the following sections:

## I.Conceptual Framework

### 1. The Concept of Artificial Intelligence

John McCarthy introduced the term **"Artificial Intelligence,"** which is abbreviated as **"AI."** It first appeared in 1955 under the designation "the science and engineering of making intelligent machines." Etymologically, the term "intelligence" is derived from the Latin *intelligere*, referring to the capacity to understand and discern facts, while the term "artificial" pertains to computers and other

technological applications. This implies a reliance on electronics, communication sciences, cognitive science, psychology, and various algorithms.

Artificial Intelligence is defined as a pivotal term in the internet domain, describing the mutual interaction between humans and machines or software. It facilitates the integration of algorithms and data, processing complex algorithms through mathematical tools to yield results that enable sound decision-making (Marwa, 2025, p. 36)

In the context of work, Artificial Intelligence refers to the study of intelligent behavior and represents an attempt to find ways to imbue artificial machines with such behavior (Whitby, 2008, p. 15). Furthermore, it can be defined as "systems using techniques capable of gathering and utilizing data to predict, recommend, or make decisions with varying levels of autonomy, selecting the optimal action to achieve specific objectives" (Artificial, 2022, p. 08).

- ❖ **Operational Definition:** Artificial Intelligence is a machine-based system that competes with human labor through the use of technological devices.

## 2. The Concept of Identity

In technical terms, the American social psychologist **Erik Erikson** was among the first to utilize the term "Identity" within the field of human and social sciences in 1950. He defined it as "a process occurring within the individual's socio-cultural framework, exerting a simultaneous psychological impact across all mental functional levels. Through this process, a person evaluates themselves based on their perception of who they are, in light of their perception of how others view them. It is a psycho-social process characterized by constant change and growth" (Mohamed, 2007) .

**Evan Miller** defined identity as the pattern of observable or inferable traits that characterize a person, defining and identifying them to themselves and to others. Accordingly, Miller categorized identity into **Self-Identity** and **Public Identity** (Al-Attiyah, 2009, p. 25) .

- ❖ **Operational Definition of Identity:**

Identity is the set of self-perceptions and cognitive characteristics through which an individual constructs an understanding of the self within a specific social and professional context. It is formed and evolved through interaction with others and the requirements of the surrounding environment, including technological shifts associated with Artificial Intelligence. This identity is measured through indicators such as the individual's perception of their competence, their sense of belonging, the level of confidence in their role within the workplace, and the extent of their ability to adapt to professional changes.

## 3. The Concept of Professional Identity

This term is frequently employed without a singular, definitive technical definition, as researchers often utilize various terms with nearly identical meanings. Professional identity is generally defined as how an individual perceives themselves within their professional group and how they communicate with others (Neary, 2014, p. 14).

Renaud Sainsaulieu introduced this concept in his work *Identity at Work*, stating that it represents the totality of norms, values, rules, and multiple affiliations that serve as the benchmarks through which members of a workgroup define themselves. It explains how an actor—whether at the individual or collective level—performs their tasks and roles, and the image projected to their colleagues.

Thus, professional identity is the essence adopted by an individual as a result of the intersection between their perception of their status and position within the organizational structure, and the status and position assigned to them by their colleagues and their social integration within the institution. It encompasses all the values and standards found within the organization. While general identity may link to "class" as a reference, professional identity is linked to the socio-professional category and the workgroup (Maidi, 2017).

### ❖ Operational Definition of Professional Identity:

There is no single, clear definition that fixes professional identity; today, it is shaped by external factors such as technical

requirements, technology, and shifting societal expectations, making identity formation more dynamic.

Operationally, professional identity in this study is defined as the sum of perceptions and representations that a worker constructs about their self within the professional field amidst the adoption of Artificial Intelligence in the organization. This is manifested through the worker's perception of their role, status, and professional competence, the nature of their interaction with the digital work environment, and their capacity to adapt to the changes imposed by this technology.

## 4. The Concept of Role Identity

Role identity is defined as an individual's self-view in relation to a specific social role. The self is multidimensional, meaning an individual can possess multiple role identities associated with the various roles they perform across different social relationships. Individuals may enact as many role identities as there are social positions they occupy (Robert, p. 03).

### ❖ Operational Definition:

In this study, role identity is operationally defined as the worker's self-perception through the roles they perform within the organization amidst the deployment of Artificial Intelligence. This includes their understanding of tasks, the definition of responsibilities, self-evaluation of performance, the nature of interaction with others, and the extent of their ability to adapt to the changes occurring within these roles.

## 5. Digital Transformation

Digitization refers to the process of converting data and processes from analog technologies into machine-readable formats. Digital technology involves the utilization and close integration of digital techniques, leading to new changes and improvements in existing activities (Titko, 2019)

Digital transformation is defined as organizational change driven by the use of digital technologies and innovative business models to improve performance. It represents a radical shift in how businesses operate and deliver services to clients by integrating digital

technology into all areas and aspects of business. The objective is to achieve institutional performance enhancement, improve the quality of advanced services, and bolster competitiveness (Jalloul, 2023).

❖ **Operational Definition:**

In this study, digital transform**a**tion is operationally defined as a continuous organizational process based on the employment of digital technologies—primarily Artificial Intelligence—in reorganizing work patterns within organizations. This encompasses the methods of task completion, professional interaction styles, and decision-making mechanisms, thereby contributing to performance enhancement and service development. It is measured by the extent of its impact on the work environment and its role in reshaping workers' perceptions of their roles and professional identities.

## II. The Impact of Artificial Intelligence on Workers' Professional Identity

### 1. Professional Self-Perception and Identity

Numerous studies indicate that the increasing reliance on Artificial Intelligence in performing professional tasks may negatively affect workers' competence in the absence of these systems. Some workers express growing fears of losing their core skills or witnessing a fundamental change in the nature of their roles within the organization. Furthermore, there is a prominent concern regarding the decline in control over professional decision-making, as a portion of cognitive authority shifts to intelligent systems. This contributes to a form of confusion within the professional identity, particularly as the boundaries between human expertise and AI capabilities become increasingly blurred.

While the adoption of these technologies may enhance productivity, it may conversely lead to the gradual marginalization of accumulated expertise through what is known as "skill loss" or "skill erosion," in addition to diminishing the sense of autonomy and the ability to influence work outcomes. This can result in a type of professional alienation, where the worker is no longer recognized as an expert actor but rather as a user of intelligent systems. Such a shift may lead to "learned helplessness," which masks negative short- and

medium-term effects behind positive performance indicators (Soha, 2026).

In this context, it can be argued that the impact of Artificial Intelligence is not limited to technical or productive aspects; it extends to the symbolic structure of labor. The worker's professional self-perception is reconfigured in light of the recession of their traditional role and the burgeoning dependence on intelligent systems. This transformation reflects a state of tension between the loss of professional control on one hand, and attempts at adaptation and the reconstruction of professional identity on the other—embodying one of the most prominent manifestations of identity disruption in the digital work environment.

## 2. Disruption of Professional Identity Amidst the Adoption of Artificial Intelligence

Artificial Intelligence poses an increasing challenge to professional identity due to its growing capacity to perform tasks that were, until recently, the exclusive domain of highly skilled and specialized workers. As organizations expand their reliance on these systems to accomplish more complex tasks, workers' anxieties regarding job security and the erosion of their core responsibilities escalate.

In this regard, supporting professional tasks with AI leads to a decline in workers' sense of professional autonomy. Their roles become more closely tied to the outputs of intelligent systems rather than their own self-competencies, leading to the perception that some of their skills have become less significant or even redundant. This constitutes a direct threat to their perception of their professional identity and their self-confidence within the professional field.

This disruption of professional identity and autonomy is closely linked to the concept of professional alienation. The worker begins to lose the symbolic connection to their work when intelligent systems assume tasks that once represented the core of their professional role, thereby destabilizing the identity the individual constructs around their labor. Consequently, the worker may feel that their work is losing its meaning and value, entering a state of identity crisis manifested in

feelings of worthlessness, declining competence, and uncertainty regarding their status within the organization (Houssaini, 2021, p. 03).

The aforementioned points reflect that the impact of Artificial Intelligence is not confined to the redistribution of tasks; it encompasses the symbolic structure upon which a worker's professional self-perception is based. The relationship between the individual and their work shifts from one based on personal achievement and acquired expertise to a mediated relationship governed by intelligent systems. This shift reproduces new forms of professional alienation related not only to the loss of control but also to the erosion of the professional meaning that grants work its value for the individual.

From this perspective, the disruption in professional identity can be understood as a result of the breakdown in the balance between the worker's self-competencies and the new work patterns imposed by the digital environment. This compels individuals to reconsider their professional self-representations, either toward a sense of threat and loss of value or toward seeking new frameworks to reconstruct this identity in alignment with the requirements of the digital age.

## 3. Artificial Intelligence and the Reconfiguration of Professional Identity in the Digital Environment

Artificial Intelligence serves as a pivotal factor in the reconfiguration of workers' professional identities in the digital age. This identity is no longer reduced to job titles or traditional years of experience; rather, it has become fundamentally linked to the individual's capacity to adapt to technological shifts and construct a flexible professional self capable of interacting with intelligent systems.

In this context, AI contributes to crystallizing new features of professional identity by supporting skill acquisition and accelerating learning processes. Additionally, it offers personalized training pathways tailored to individual needs, thereby enhancing their sense of competence and innovative capacity. Furthermore, smart learning applications play a significant role in establishing what is known as "Digital Professional Identity," as they provide interactive educational

environments that account for individual differences and foster contemporary skills such as critical thinking and collaboration within digital spheres.

Moreover, by tracking performance and analyzing professional development trajectories, intelligent systems enable individuals to understand their self-progress and identify their strengths and weaknesses. This assist them in reconstructing their career paths with greater awareness and flexibility, ultimately strengthening professional self-confidence and making professional identity more adaptable to future requirements.

## 4. Artificial Intelligence and Professional Identity Between Acceptance and Resistance: Toward Understanding the Digital Identity Threat

Despite the growing optimistic discourse surrounding Artificial Intelligence in recent years, fears associated with potential job displacement continue to overshadow positive perceptions regarding human-machine collaboration. The interaction between workers and AI systems reveals that individual attitudes toward this technology are determined not only by its technical capabilities but also by how it is perceived—both in terms of available potential and the nature of collaborative interaction—which in turn reflects on their emotions and intentions toward its use.

In this regard, workers develop forms of identity linked to the technology utilized in the workplace, where the concept of "Digital Identity" or "IT Identity" has emerged as an indicator of the extent to which an individual integrates technology into their professional self-conception. However, the introduction of AI into the workplace may conflict with this identity, particularly when it is viewed as a potential substitute for human expertise, leading to the emergence of resistant behaviors, including what is termed "Algorithm Aversion."

This concept refers to the tendency of workers to prefer human decisions over those generated by intelligent systems, even when presented with the same data. This reflects a tension between professional self-trust and trust in technology. Some studies have interpreted this resistance as a response to a "Professional Identity

Threat," where individuals feel that their roles and status within the workplace are being redefined. In light of these transformations, it appears that Artificial Intelligence does not merely change the nature of jobs; its impact extends to reshaping the professional identities of workers within organizations (Mirababaie, 2022)

The aforementioned points demonstrate that the relationship between the worker and AI should not be understood solely within the framework of acceptance or rejection. Instead, it must be analyzed from a sociological perspective linked to professional identity. Resistant behaviors, such as algorithm aversion, represent an attempt to maintain professional self-cohesion in the face of digital transformations. From this standpoint, Artificial Intelligence can be considered a dual-effect factor: simultaneously triggering feelings of threat and anxiety while opening the door for the reconstruction of professional identity on new foundations. This reflects the dynamic nature of identity within the context of digital labor.

## 5. Artificial Intelligence and Work Ethics: Its Impact on Workers' Professional Identity

The deployment of Artificial Intelligence in contemporary work environments raises increasing ethical dilemmas, which are not confined to the nature of decisions made by intelligent systems but extend to the worker's position and role within the professional ecosystem. In this context, the utilitarian perspective is one of the most prominent ethical approaches utilized in designing AI systems, as it is based on the principle of achieving the greatest benefit for the greatest number of individuals, even if at the expense of individual considerations.

However, adopting such an approach within the work environment may reflect on the worker's perception of their professional identity. The transfer of a portion of the decision-making process to intelligent systems leads to a reduction in the worker's role as a responsible moral agent, gradually transforming them into an implementer or a monitor of decisions subject to computational logic. This shift results in a decline in the sense of professional autonomy and weakens the sense of individual responsibility, particularly in

situations that previously required human judgment based on experience and discretion.

On the other hand, although the utilitarian approach provides a practical framework for making swift and efficient decisions and contributes to mitigating conflicts related to individual interests, it poses challenges concerning uncertainty and the difficulty of predicting the outcomes of decisions generated by intelligent systems. This may negatively affect the worker's trust in these systems and increase the state of tension and confusion regarding their professional role within the organization (Hanan, 2025)

The aforementioned points reflect that the ethical dimension of Artificial Intelligence cannot be separated from the issue of professional identity. It contributes to redefining the worker's role between being an independent moral agent and an implementer of technological decisions. This deepens the manifestations of disruption in professional identity while simultaneously opening the field for its reconfiguration according to the requirements of the digital work environment

# CONCLUSION

In conclusion, it is evident from the foregoing that Artificial Intelligence is no longer merely a technical tool for optimizing organizational performance; rather, it has become an influential actor in reshaping the deep structure of labor, most notably the professional identity of workers. These digital transformations have induced a state of disruption in individuals' professional self-perceptions, resulting from the decline of their autonomy, the blurring of roles between human and machine, and the burgeoning reliance on intelligent systems for decision-making. This shift is reflected in feelings of anxiety and uncertainty, as well as the emergence of forms of professional alienation and technological resistance.

However, the impact of Artificial Intelligence cannot be reduced to a mere source of threat. Analysis has demonstrated that it also contributes to reconstructing professional identity on new foundations rooted in flexibility, continuous learning, and positive interaction with technological shifts. This transformation has facilitated the emergence

of new patterns of professional competence and opened the field for individuals to redefine themselves in alignment with the requirements of the digital environment, particularly through the development of analytical and innovative skills and the enhancement of professional self-confidence.

Furthermore, it has become clear that the ethical dimension of Artificial Intelligence adds another layer of complexity to this relationship. It necessitates a reconsideration of the worker's role as both a professional and moral agent, given the transfer of a portion of responsibility to intelligent systems—a process that reconfigures the meanings of responsibility and autonomy within the workplace. From this perspective, the relationship between Artificial Intelligence and professional identity manifests as a dual dialectical relationship,

encompassing both threat and reconfiguration, and disruption and adaptation.

Accordingly, understanding these transformations requires the adoption of a comprehensive sociological approach that accounts for the technical, symbolic, and ethical dimensions of labor. Such an approach contributes to guiding this digital transition in a manner that ensures the maintenance and enhancement of professional identity balance, rather than its undermining, within a professional world moving toward increased intelligence and digitization.

Finally, it can be asserted that professional identity constitutes a construct encompassing various fundamental aspects of individuals' work, taking into account their past, present, and future. Professional identity grants individuals a sense of pride and belonging—a sentiment that is developed and reinforced through learning, interaction, and the performance of tasks that hold personal significance for the individual.

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