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Digitization and Professional Transformation:

From Craft to the Virtual Profession

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ABSTRACT

The contemporary world is experiencing radical transformations in the nature of professions due to the digital revolution. Historically, work was linked to manual and artisanal effort and later to factories and modern industrial organizations; today it is embodied in borderless digital spaces. This transformation is not confined to technical dimensions alone, but extends to value systems and social norms that determine the position of work and its recognition. This paper aims to analyse the transition from the traditional craft to the virtual profession through a sociological approach based on tracing the historical trajectory of professions, examining the effect of digitization on professional values and anticipating the future of work in the digital society.

1. Introduction

Since antiquity, work has constituted one of the fundamental pillars of human life—not only as a means of producing material goods but also as a mechanism for social integration and the construction of status. In traditional societies, manual crafts represented expressions of individual skill and were a limited source of social recognition. With the industrial revolution, professions experienced a qualitative shift toward an institutional character and bureaucratic organization, becoming more closely tied to machinery and the complex division of labour.

The twenty-first century, however, has brought with it an unprecedented transformation through digitization, artificial intelligence and virtual communication. A new pattern of professions practised in digital spaces has emerged, such as freelancing online, digital marketing, application programming and content creation. This transformation raises profound questions about the nature of the profession, its value and its impact on the worker's social identity. Accordingly, this study sheds light on the transformations brought about by digitization in the professional field, focusing on the transition from the hand-based craft to the virtual profession that rests on digital knowledge.

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2. Problem statement

How has digitization contributed to reshaping the concept of the profession and the associated value transformations, such that we have moved from the model of the traditional craft to the model of the virtual profession in the digital society?

3. Research objectives

1. Trace the historical trajectory of the transformation of professions from craft to digitization.
2. Analyse the role of digitization in redefining the profession.
3. Highlight value transformations from manual labour to digital knowledge.
4. Anticipate the future of virtual professions and their social status.

4. Theoretical and conceptual framework

Craft is defined as an economic activity characterized by the combination of ownership of the means of production and work at the same time. According to the text, "The craftsman is the person who owns the means of production (workshop, tools, rudimentary machines) and who works at the same time. He buys his raw materials, completes work upon order and undertakes selling without intermediaries; thus he assumes the functions of management, production and marketing" (Mukhtar, 2014, p. 315). Contemporary studies indicate that some traditional manual occupations such as the cobbler, locksmith and plumber work independently, whereas the liberal professions—such as the physician, lawyer and architect—represent an extension of this artisanal model. Nonetheless, this image of craftsmanship, which constituted a principal basis of production, has undergone significant transformations that led to the separation of capital from labour (*séparation du capital et du travail*) and the separation of training from work. Craft alone no longer guarantees economic activity; new production systems have emerged that require the integration of activities to ensure continuity of production.

The profession is defined as "work that requires specialized knowledge and skill acquired not only through experience but through theoretical study that is tested by university examinations or in accredited institutes" (Mukhtar, 2014, p. 316). Division of labour, as a fundamental principle for the emergence of professions, results in a significant increase in productivity. The traditional idea suggests that when the division of labour is applied—for example, in the manufacture of a pin, a nail or a piece of clothing—eighteen workers can produce one hundred times what each could produce working individually; the same applies to the specialised blacksmith making nails who produces many times more in a working day than an ordinary blacksmith.

5. Concept of digitization

Digitization refers to the process by which data and information contained in paper files and documents are converted into a digital form in order to preserve and protect them. According to the definition, "Separate units of data called *bits* are created, in which information is organized, and then that information is processed separately in units called *bytes*" (Bakkah for Education, 2025). When data and information are converted into their digital form, they become capable of being processed by computers and other computing devices, such as digital cameras and digital hearing devices. Practical examples of digitization include scanning images or converting reports into PDF files and storing them on a computer. It should be noted that the digitization process does not change the content of the information or data themselves; rather, it facilitates access to, management of and storage of them

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more flexibly. Institutions and companies thus benefit from the ability to quickly access essential information, which enhances efficiency and enables decision-making to be based on accurate and up-to-date data.

6. Concept of the virtual profession

6.1. Virtual profession and remote work

The concept of remote work—or the virtual profession—refers to a modern working pattern that enables employees to perform their functional tasks away from the traditional office setting, allowing them to work from any place where an internet connection is available. This mode depends on a set of digital technologies such as e-mail, instant messaging, voice and video calls and collaborative applications on the internet, including collaborative work platforms and project management systems. Remote work is defined as "a relatively modern system that means that the employee and his or her manager or the administration in general work from two different places—whether this place is the home, another city, another country or shared workspaces. Remote work is a continuous long-term system, especially in light of the ever-changing modern world" (Bakkah, 2025). Remote work has become possible thanks to technological developments, and employees are no longer restricted to traditional offices. The COVID-19 pandemic has also contributed to generalizing this system, as employees were forced to work from their homes even when their companies preferred the traditional style.

Despite the numerous advantages of remote work, it poses a challenge for company managers implementing these policies for the first time. According to a recent study by the Society for Human Resource Management (SHRM), "Approximately 71 % of employees find it difficult to adapt to working remotely and conducting business" (Bakkah, 2025).

6.2. Fields of remote work

Modern technology offers broad opportunities for remote work in several fields, most notably information technology and software development, digital marketing and social media management, writing and editing, distance education, graphic design and animation, financial services and accounting, technical support and customer service and translation and languages. This work pattern constitutes the basis of the virtual profession, since geographical location is no longer an obstacle to practising professional skills; this enhances flexibility and allows the employee to choose his or her working environment in accordance with personal circumstances and needs.

7. Theoretical framework

Three basic approaches can be used:

- **Sociology of work approach:** studies how the nature of work changes over time (Kurzynski, 2024).
- **Manuel Castells's network approach:** sees that digitization has established a network society that reshapes professional relationships.
- **Antonio Casilli's approach to digital labour:** shows how virtual professions are not an ideal alternative but reflect new forms of precarity and exploitation.

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8. From craft to profession – a historical path

Artisanal work: history and concept

Evolution of artisanal work across the ages

Ancient periods: In primitive societies, artisanal work was linked to the need for survival and natural resources; it depended on hunting and gathering food and was initially limited to producing basic tools. With the appearance of metals, new professions and specialized categories emerged. During this period, artisanal work aimed at producing tools of labour rather than consumer goods (Kroft, 1981, p. 56). As production expanded, the relationship between artisans and traders developed to become an economic and social network.

Ancient civilizations: In Pharaonic civilization, artisans held a distinguished social and economic position; some artisans achieved wealth and status thanks to their mastery. By contrast, Greek civilization regarded manual labour as an inferior task; Aristotle described it as "work that turns the mind into a savage mind." In Europe, artisanal industry collapsed after the fall of Rome and turned towards agriculture, with farming being revered and manual labour despised.

The Middle Ages: Europe witnessed the emergence of craft guilds, which organized work hierarchically and achieved two main objectives: "maintaining equality among craftsmen" (Saʿati, 1989, p. 61) and maintaining their status in traditional society. The manufactory system also appeared, in which the shop owner became a supervisor of the production process, whereas the worker's role was limited to execution.

The modern era: The industrial revolution affected artisanal work, as machines became capable of producing more quickly, reducing demand for handmade products. Nevertheless, after the Second World War, artisans regained some of their standing due to demand for their services and government support. Socialist thought also emphasized that "every person should work according to his ability and be compensated according to his work" (Farah, 1981, p. 53).

The modern profession

With the industrial revolution, work became more specialized and tied to institutions—factories and administrations. Bureaucracy emerged as a framework for organizing professions. Although craft did not disappear, it was re-adapted—for example, traditional craft products today are sold online.

8. Digitization and redefinition of the profession

Digitization has brought about a fundamental transformation in the structure of professions and the nature of work, such that the profession is no longer tied to a fixed material structure or specific geographical location as in traditional models of work. Technical development has transferred professional activity to borderless digital spaces, reshaping the concept of "work" itself and reconfiguring the professional and social relationships associated with it.

Decoupling of place and work

With the spread of advanced communication tools, digital platforms and ease of access to the internet, professionals can practise their activity from any place without needing an institutional headquarters or office structure. This transformation broke the historical link between profession and place of practice and created a new

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kind of professional decentralization. An individual can market his or her services to a global audience, which expanded the scope of opportunities, but it simultaneously created challenges related to global competition, productivity pressures and dependence on platform algorithms.

The rise of knowledge capital at the expense of physical capital

Today's virtual professions rely on knowledge, technical skills and creativity more than on physical effort. This shift reflects the transition of the economy from an industrial-material model to a knowledge-digital model, where the ability to analyse, organize, innovate and keep pace with technology is the main determinant of professional value. In this sense, new professions have emerged that require only a device connected to the internet, such as data analysis, content creation, programming, design and digital consultancy.

Platform economy: a new space for work or a hidden form of employment?

The platform economy, exemplified by companies such as Uber, Upwork and Amazon Mechanical Turk, has presented a new model of service provision based on digital intermediation between worker and client. This model has granted workers wide freedom to set their working times, move between tasks and choose clients. Conversely, it has raised deep debate about the legal nature of the relationship between the platform and the worker:

- **Is the worker truly free?** Platforms market themselves as merely intermediaries that grant the worker independence. In practice, however, the worker is subject to user evaluations and task distribution algorithms, which restrict him or her to the platform's standards.
- **Or is he an undeclared employee?** Several researchers argue that the worker in the platform economy performs tasks organized according to rules and conditions determined by the platform without receiving the social privileges enjoyed by a traditional employee—such as insurance, holidays and job security (e.g., protection analogous to the benefits associated with employment). This situation places the worker in a grey zone between self-employment and wage labour and raises legal and social issues concerning the protection of rights and the guarantee of stability.

Reshaping professional identity

The effects of digitization are not limited to the structure of work; they extend to include the worker's identity itself. The digital professional experiences a continuous transition between multiple roles: service provider, self-learner, self-marketer and a person interacting with algorithms that determine visibility and opportunities. This overlap redefines the concept of professional belonging and challenges the traditional criteria for recognition of expertise, making professional identity construction a dynamic process rather than a static state.

Axis III: Value transformations – from manual labour to the digital mindset

Human societies have witnessed, through their economic and technological transformations, a profound shift in the value systems that regulate work and grant professions their legitimacy and status. Professional value is no longer fixed or linked to a single source; rather, it has transformed according to the structure of each stage of productive development—from manual craft, through the industrial factory, to the virtual space and knowledge work. This shift reveals a gradual move from reliance on muscular effort to investing in intelligence, digital skill and the ability to deal with knowledge.

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In the traditional craft: the value of mastery and manual skill

Across history, craft professions were based on manual effort and skills accumulated through years of training and practice. Social recognition of the craftsman was based on mastery and the "material trace" left by the work: a tangible product of quality bearing the worker's signature and experience. In this context, the body was the main source of value; through it, work was executed, income generated and professional status acquired.

In the industrial profession: the value of discipline and specialization

With the industrial revolution and the emergence of the factory, the value equation changed. Individual skill was no longer the foundation; it was replaced by discipline, respect for time and division of labour. Professional value came to be measured by the worker's ability to integrate into a collective production system that depends on adherence to routine, respect for hierarchy, precise specialization in a single task and the ability to work at the pace of the machine. With this transformation, the centre of value moved from personal craftsmanship to the industrial job, which is evaluated as part of a massive production that does not carry the individual worker's signature. Here the body began to lose its centrality in favour of the ability to submit to the system.

In virtual professions: the value of digital skills, adaptation and creativity

With the emergence of the digital economy, professional value changed again to be linked to cognitive capacities and digital skills. In this context, technical skills—programming, data analysis and digital design—have become the foundation of production; speed of adaptation has become a condition for survival in a rapidly transforming labour market; and creativity has become a criterion of excellence, especially in fields related to content, digital marketing and technological development. In virtual professions, industrial time and physical effort no longer determine value; rather, the ability to deal with knowledge, generate ideas and continuously interact with a changing digital environment does.

Informational capital according to Castells: basis of status in the network society

In his analysis of the network society, Manuel Castells argues that the new value in the digital era is what he calls "informational capital." This is a new form of capital based on possessing information, the ability to produce and process it, control over its flow within networks and investment of it in decision-making or building influence. In this society, knowledge becomes the primary source of power, and one's position within informational networks determines the individual's social and professional value. Those who have the ability to perceive digital transformations and invest in them become more capable of influence and professional advancement, while others face the risk of marginalization.

Axis IV: Social and legal recognition of virtual professions

Despite the widespread prevalence of virtual professions and their increasing integration into the structure of the digital economy, social and legal recognition of them remains contested. Modern societies have not yet resolved whether these activities constitute "professions" in the traditional sense of the word or whether they are merely new work patterns imposed by technology without fulfilling the conditions of professional institutionalization.

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Debate over defining the "virtual profession"

Historically, a profession has been associated with clear criteria: an institutional framework, specialized training, social recognition, union organization and legal regulations governing practice. Virtual professions often lack some of these elements, leading some to describe them as merely digital economic activities rather than fully-fledged professions. Others, however, argue that digital transformation is redefining the profession and that the criterion of value and skill may compensate for the absence of traditional institutional frameworks.

Absence of social protection for platform workers

The social dimension represents one of the main challenges. Workers on digital platforms—whether service providers, platform drivers or freelancers on gig sites—usually do not enjoy social security, health insurance, union rights or protection from occupational hazards or loss of income. This situation places them in a circle of professional precariousness and makes their income dependent on platform algorithms and customer ratings, without a legal framework that protects them or ensures their stability.

Legislative attempts to regulate virtual professions

In response to these issues, political and legal initiatives have emerged in several global contexts. Among the most prominent is the draft law issued by the European Union in 2022 on redefining the status of workers on digital platforms. The project aims to determine whether the worker is self-employed or an employee based on clear criteria related to control, supervision and the nature of the relationship with the platform. It also seeks to grant workers basic rights, such as a minimum level of social protection and transparency in algorithms. Although these efforts have not yet been completed, they indicate the beginning of official recognition of the need to regulate this growing sector.

9. Anticipating the future of virtual professions

The professional future in the digital age represents a path open to several possibilities that differ according to policies, technological development and the ability of societies to keep up with transformations. The foresight can be summarized in three basic directions:

1. **First scenario:** In this scenario, digital professions gradually evolve toward full recognition through establishing recognized certificates and professional qualifications, creating unions or representative bodies for workers, issuing new laws regulating the professional relationship and protecting rights and integrating these professions into the formal economy. This scenario opens horizons for a more stable future in which virtual professions become part of the traditional professional system with social and legal guarantees.
2. **Second scenario:** This scenario focuses on the risks of digital discrimination. Individuals who possess advanced technical skills, good access to technology and the ability to learn quickly will obtain significant gains in the digital labour market. Others, however, will face difficulty integrating, leading to widening the gap between digital and non-digital actors. Thus virtual professions may become a source of reinforcing inequalities rather than reducing them.
3. **Third scenario:** In this scenario, platforms continue to expand without strong legal frameworks, leading to highly precarious professions, absence of job stability, complete reliance on algorithms, increased undeclared work and digital exploitation that exceeds what currently exists. Here, digital work turns into a

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high-risk domain in which the worker loses control over working conditions and increases dependency on platforms.

Conclusion

This paper has shown that digitization has not been limited to introducing new tools into work; rather, it has produced a radical transformation in the very concept of the profession. Whereas the craft relied on manual effort and individual skill and the modern profession was redefined according to bureaucratic and institutional organization, the virtual profession has come to reshape the relationship between worker and work within a borderless digital space. This transformation reflects a shift in values from a culture of handcraft and mastery to a culture of digital knowledge and flexibility, carrying with it opportunities—creativity, independence and freedom—and challenges—professional precarity, lack of recognition and weak social protection. Accordingly, sociology today is called upon to rethink its classical concepts of work and profession by opening up to issues of digital professional identity, the platform economy and social recognition in the virtual space.

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