Research on "Digital Labor's" Practical Attribute

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ABSTRACT
With global digital economy and science technology's rapid development, "digital labor" has become a new labor style which will increase new vitality for global economy's development. But "digital labor" still has human beings' essential attribute, at the same time it has new characteristics promoted by social and technological conditions which show digital, sharing, emotional expression and so on in labor practice. In labor's process, there are a lot of new forms such as Internet industrial labor, Internet platform labor, and Internet cooperative labor, which need to constantly be regulated in labor practice " so as to make "digital labor's" function more important in promoting "digital economy's" development.

Keywords: *Digital labor, Internet, Practice attribute, Practice form.*

1. INTRODUCTION

With Internet information technology and digital intelligent information's coming, digital economy making Internet as a main labour object has been growing, increasingly breaking the barrier made by traditional fixed labor, such as labor time and labor places, which attracted a large number of laborers to create many new jobs, so digital labor has been becoming a non-marginal labor mode. Therefore, sorting out "digital labor's" attributes from theoretical and practical levels has important theoretical value and practical enlightenment for correctly recognizing problems related to future labor mode, so it is necessary to talk about the subject.

2. "DIGITAL LABOR'S" CONCEPT AND CONNOTATION

"Digital labor's" concept was first proposed by an Italian scholar called Tiziana Terranova. In 2000, Terranova published "Free Labor: Producing Culture for the Digital Economy", in which "digital labor" was first proposed, namely "free labor for all Internet users, including browsing web, responding to comments and sending emails". Obviously, Terlanova referred autonomy "non-material labor" concept to define "digital labor" as a kind of free unpaid labor in field of Internet. Since then, this view has aroused discussion and controversy by many experts in theoretical and practical circles forming two representative views.

2.1 Scholars' Views Represented by Teranova

"Digital labor" is a kind of "non-material labor" mainly based on "Internet users'" activities and belongs to "free labor". Accordingly, "digital labor" can be classified into four types: professional labor, unpaid labor, audience labor and play labor in the Internet industry. This kind of ideas is coming from internet creating the concept for the first time with an important value. It not only results from the new technology, but also finds the new style for labor. From then on, there were a lot of ideas about digital labor to make a new theory talk and new practice in labor.

2.2 Scholars' Views Represented by Christian Fox

Basing on Marxist political economy, Fox believes that "digital work and digital labor are a broad category including all activities involving digital media technology and its content production", that is, "digital labor" is not limited to "Internet" industry, but should cover "all digital media-related activities". [1] Accordingly, he believed that the "Four types" from Terranova are only "digital labor's" part, which should cover more

areas and cover labor material and non-material labor" with cognition, communication and cooperation. These ideas make is more clear for digital labor concept, which has become a main idea for digital labor.

2.3 "Digital Labor's" Double Connotation

Marx interpreted labor from philosophical implication and political economy implication. From philosophical implication, he thought that labor nature could be understood as "perceptual human activity" and "objective activity"; From political and economic implication, he said that it could depend on different historical stages, social systems, activities' scope, activities' groups, etc., which would be bound to show realistic pluralism. Therefore, "digital labor" is not completely divorced from nature, but still belongs to "perceptual human activity" and "object activity". Of course, "digital labor" is the labor in digital media and network and other mental and physical consumption, which is an inevitable result "with the development in labor's cooperative nature process itself", namely, production labor and its undertaker production workers concept will inevitably expand".

Therefore, "digital labor's" concept basically reached a consensus, but there are still disputes over "digital labor's" connotation. One is whether "digital labor" should cover "material labor"? The other is whether "digital labor" should be expanded beyond "Internet"? The author tends to be the second view, that is, "digital labor" making a "digital" as the symbol relies on Internet, Internet of things, artificial intelligence, multimedia, which has consistency nature with traditional labour but multiple differences in performance form belonging to future social development.

3. "DIGITAL LABOR'S" PRACTICAL ATTRIBUTES

"Digital labor" inherits and develops Marxist labor attributes and deepens new elements' influence such as science and technology on modern labor to add many new attributes to modern labor, but whose essence is not divorced from traditional labor attributes.

3.1 "Digital Labor's" Technical Attribute

"Digital labor" mainly relies on digital technology's characteristics, whose related labor objects and tools exist in form of numbers in virtual space constructed by information technology.

"Digital labor" is a kind of information labor that takes immaterial data as labor raw materials. It mainly occurs in cyberspace through which data generated jointly by digital users and internet-related industries are further processed to realize digital capital's increment. Data itself is independent and chaotic, seemingly without economic value, but whose value created by processing data into information and aggregating data into knowledge is immeasurable. This special labor raw materials and labor mode greatly changed traditional labor mode. Workers use production tools such as hardware equipment and application platform to complete labor process, digital information technology separates labor process from material production process, by which combining labor and material production's attribute is hidden. As a production tool, digital technology is penetrated into productivity's basic elements, and is integrated into whole production process, which transforms into its value's realizing ability to make a significant impact on original working mode. For example, workers can be more flexible and use production means independently, and can arrange time and place to make production independently. As a result, production process is no longer limited to traditional factory model, nor to fixed workshops and machines resulting in a unique technical nature.

3.2 "Digital Labor's" Data Attribute

"Digital labor's" main object is virtualized data, which becomes an important reference for resource allocation and provides new power for high-quality economic development. At the same time, digitalization will also bring some inevitable hidden worries.

On the one hand, "digital labor's" digital nature promotes whole labor process' precision, convenience and traceability to improve labor efficiency and quality. For example, online questionnaire survey can not only save time and manpower, but also expand questionnaire survey's breadth, depth and accuracy to obtain more scientific data. On the other hand, due to "digital labor's" digital nature, both production and consumption activities can be carried out through Internet platform, and the boundary between production and consumption activities is increasingly blurred. The public also produces digital products while consuming digital products. Futurologists Toffler believed that everyone is a production and consumption's combination. In "combination of production and consumption"

economy, people do not produce for sales and exchange, but for their own use or self-satisfaction. [2]For example, when shopping on Internet platforms to meet their own consumption needs, consumers' purchasing preferences and other records are processed by professionals to promote production scale and marketing methods in certain products. Terranova also makes it clear that "free Labour is being produced at a time when knowledge cultural consumption is transformed into productive activity, which is cheerfully accepted and often shamelessly exploited."[3]

3.3 "Digital Labor's" Sharing Attribute

Sharing is free labor or people's free activities' natural attribute, which covers sharing labor process and sharing labor results. On the one hand, only in process of free participation in labor, human beings can obtain labor's happiness to realize sharing labor activities and provide labor achievements' premise; On the other hand, on basis of productive forces development and abundant labor fruits, human beings can realize sharing labor fruits through rational distribution, which is sharing labor's inevitable pursuit. Therefore, "digital labor" sharing must also follow labor sharing attribute to show a stronger sharing attribute.

At present, based on Internet's open sharing and instant sharing characteristics, "digital labor" far exceeds traditional labor' sharing. On the one hand, "digital labor" highlights workers' sharing labor process and sharing labor fruits. When digital workers provide resource flow through Internet, digital workers also share the information achievements created by other workers through Internet. The information sharing process is also "digital labor's" process, which naturally includes the objective process sharing others' achievements. On the other hand, "digital labor" provides others with shared achievements, naturally facilitating others to share labor process. "Digital labor" is not only Internet users' self-expression and communication, but also in-depth participation in social and economic development, which is a virtual space integrating communication function with social nature and community characteristics. Digital workers are compatible with a variety of communication methods. Internet communication reaches society's every corner and breaks information sharing level's binary opposition. Because data's transmission mode is mainly communication and sharing, whose value can only be realized in transmission. In process of data consumption, more data will be further output without loss. Therefore, data-based "digital labor" creating higher value is bound to further shift to sharing mode.

3.4 "Digital Labor's" Emotion Expression Attribute

Compared with traditional wage labor, "digital labor" shows workers' emotion clearly and directly, because "digital labor" will unify their passion, sentiment and feeling information with labor materials, and then through Internet media communication will evolve from personal emotion to public emotion. This characteristic makes digital labor materials and digital labor products become more "human". Marx pointed out: "Production includes material production and spiritual production, as for any machine, they are human mind organs created by the human hand, which is knowledge's physical force.[4] Therefore, in "digital labor", people convert their previous knowledge into data, which is then used in productive activities. "Both Man's sense and sense's humanity arise from his object existence from the humanized nature."[5] In participating in production and consumption, digital workers leave a lot of data traces on Internet platforms, such as personal information, consumption preferences, social relations and many other private information. Consumption information is also data production, thus blurring the boundary between consumption and production.

4. "DIGITAL LABOR'S" PRACTICE FORM

Based on "digital labor's" person's essential attribute and free activities associated with internet-based emerging multimedia tools, high and new technology industry "digital labor" shows labor's diversity practice basically includes the following three categories: Internet professional work, Internet platform labor, Internet cooperation labor, etc.

4.1 Internet Professional Work

Internet industry labor refers to specialized labor engaged in Internet development, design and management, which is characterized by using corresponding tools or knowledge to transform digital materials into products, including hardware manufacturing, software development, technology promotion, information services, etc., with high

difficulty, strong professional knowledge, and high professional skills, Such as various apps, web pages, etc. According to the White Paper on Global Digital Economy released by the China Academy of Information and Communications In 2021, the added value of digital economy in 47 countries reached US $32.6 trillion in 2020 with a year-on-year growth of 3.0% and accounting for 43.7% of GDP. Industrial digitalization is main engine for digital economy development. Therefore, professional workers in Internet industries become main digital workers. Compared with traditional labor, labor time and location in Internet industries are more flexible showing a trend of fragmentation and decentralization. Meanwhile, they also face problems such as high pressure, fierce competition and large labor burden.

4.2 Internet Platform Labor

Internet platform labor (unpaid labor) is an important form of "digital labor", and is production labor that Internet users unconsciously carry out when using the Internet.

4.2.1 Internet Users Produce Content

When users use Internet, they will generate a large amount of hidden data when they share dynamic information, share information, share mood, browse web and so on. These data are provided to advertisers or brands by platform after professional processing. The users' income generated by these data is 0. Fox identifies Internet user's average labor as a type of "unpaid labor", which means that "users on commercial social media platforms are not paid, and their using hours are not spent in order to be paid." [6]

4.2.2 "Playing Labor" in Internet Entertainment Industry Chain

"Playing labor" is proposed and explained by Schultz, that is, with Internet's popularization, the boundary between "play" and "labor" is gradually blurred. On the one hand, that Internet's users for shopping, games, reading, entertainment, watching video and other social behaviors to satisfy their own consumption, entertainment, leisure life demand, which is the process to share "activity", looks like "play", and does not belong to " labor", but if interpreted this way from philosophical implication nature, it still has labor's essential attribute and also creates value. On the other hand, when users carry out "activities" to meet their own needs through Internet, they leave data traces on Internet platform, which may provide data information such as consumer orientation, advertising, brand description and consumer psychology with greater value after sorting out. This is a new form of labor affected by certain social factors being analyzed from political economy perspective, which also creates value. Therefore, labor on Internet platforms often becomes a main form of "unpaid labor", which is also in field of "digital labor" that needs urgent attention.

4.3 Internet Cooperative Labor

It mainly refers to the kind of labor using technical conditions on Internet platform through online and offline cooperative labor to carry out. It not only contains "digital" attributes, but also includes traditional labor's attributes, which is a new form of combination of the two kinds, but also increasingly mainstream labor form in the era of artificial intelligence. It will involve both non-material and material labor, such as current relatively popular platform for odd jobs, workers use Internet platform to make corresponding compensation, but working time and space have very strong autonomy and flexibility, they can choose their work time and intensity and workers are no longer controlled by employment directly, but through direct docking platform and market to exchange value.[7] For example, such industries as network broadcast, online car booking, designated driving, take-out and network writer is a typical online and offline cooperative labor. Online ordering or content release means that actual workers are real people offline. The gig economy attracts all levels people with its low threshold, flexible and free work. According to Ali Research, there will be 400 million freelancers in the gig economy in China by 2036, and about half of workforce will provide production and services in form of gig jobs. [8] At the same time, a considerable part of industrial labor cannot be separated from the support of Internet ARTIFICIAL intelligence, which will also include mutual assistance component of "digital labor" and become an important structure of Internet cooperative labor. Therefore, Internet cooperative labor will become "digital labor".

5. CONCLUSION

In a word, "digital labor", as an emerging labor mode with great development potential, has shown

its own unique operation mode to provide a large number of jobs for social and economic development and create a large number of social wealth. However, "digital labor" does not get rid of labor's essential attribute, but it must be an important labor form influenced by social and technological factors. It is important to seriously care about its practical attribute, and constantly improve this labor form in practice norms to provide wealth creation guarantee for future social development.

AUTHORS' CONTRIBUTIONS

Junfeng Xu is responsible for experimental design and contributed to revising and editing; Yunfei Yu and Yujia Ma wrote the manuscript.

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