



Sociedad Internacional de Derecho del Trabajo y de la Seguridad Social

XXIII Congreso Mundial

7 - 10 de Septiembre de 2021 - Lima, Perú

RETOS DE LOS SISTEMAS DE LEGISLACIÓN LABORAL Y SEGURIDAD SOCIAL

- Transformación del trabajo: desafíos para el Derecho del Trabajo
- Comercio internacional y trabajo
- Nuevos retos de la Seguridad Social
- Trabajadores migrantes
- Trabajadores atípicos e informales
- Igualdad en el trabajo
- El Estado y las nuevas formas de voz colectiva



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PATROCINADORES



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**TRABAJADORES ATÍPICOS
E INFORMALES**

**NON-STANDARD AND
INFORMAL WORKERS**

HETEROMATION: LABOR AND COLONIALITY IN DATA DRIVEN ECONOMY*

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ABSTRACT: Despite capitalism desire for total automation, human beings are still a fundamental asset, producing *surplus* value through data. Heteromation is the user's unpaid work on networks that generates data for technology companies. By capturing these data, algorithms can predict or alter human behavior. Heteromation's data are sold, maintaining the power structures of class, race, nationality, and gender that were created during colonization, but remain in contemporary social relations. However, Labor Law continues to ignore data coloniality in labor relations, disregarding heteromation. The legal regulation of data is still made in a privatistic and personal perspective, ignoring the epistemology of social rights. Therefore, it is urgent to apply decoloniality of knowledge in Labor Law, with the redefinition of the legal concept of work, time and value in data driven economy.

KEYWORDS: Labor Law. Heteromation. Coloniality of power.

1. INTRODUCTION

In a simple way, algorithms could be defined as a series of formal and abstract instructions on which a computer is called to complete a task¹. It is necessary to reflect on the impact of these algorithms on our everyday life; on how much they can influence our daily decisions: advertising messages as sections of articles “recommended for you” on online purchases, creating a playlist of songs according to our musical tastes or proposing certain accommodation when we book a travel. For example, a project called “Cloud Valley”, created by the Chinese company “Terminus”, plans to use sensors and devices to collect data on all human life’s aspects: from weather to pollution; from food to consumption desires, to automatically meet the needs of residents, anticipating them².

We need to think about the impact of the use of our data extracted from devices such as tablets, e-mail boxes, social networks. The problem is not algorithms and technology, but the distorted and non-transparent use of them. We refer to the direct or indirect use of our data, without our conscious consent, related to personal behavior, as our food taste, our preferences for a kind of transport or for certain types of clothes. There is a “computerization” of our lives,

1 ALOISI, A. DE STEFANO, V. Il tuo capo è un algoritmo. Contro il lavoro disumano, 2020, p. 52.

2 PIERANNI, Simone. “L'algoritmo manager ti licenzia per errore. E non puoi protestare”. L'Espresso, n. 14, 2021, p. 82.

which every real or non-real movement is traced, manipulated, and archived for statistical, financial, commercial, electoral, or legal purposes³.

This “computerization” also stands for the legal concept of work in data driven economy. Despite capitalism desire for total automation, human beings are still a fundamental asset, producing *surplus* value generating data. Heteromation is the user’s unpaid work on networks that generates data for technology companies⁴. By capturing these data, algorithms can predict or alter human behavior. Heteromation’s data are sold, maintaining the power structures of class, race, nationality, and gender that were created during colonization, but remain in contemporary social relations⁵.

The expression “data extraction” brings the idea that it is something natural, freely available in the space of nature, without being the result of someone’s work⁶. The argument created by capitalism in colonialism is that natural resources were abundant and available in space, and therefore should be valueless⁷. However, resources were not valueless *per se*, but the legal and economic structures imposed by the colonizer rationalized them in this way⁸.

Nowadays, what we have is a different version of the same movement: the appropriation of data in social relations is free, as it is an “abundant resource”⁹. However, data is not a substance found in nature. Data is the product of unpaid work that is mediated by digital technologies. There is a parallel here with the way in which capitalism appropriated natural resources and colonized’s work in colonialism, which was justified by legal, linguistic, religious, cultural means¹⁰.

3 ZUBOFF, S. “Big other: Surveillance capitalism and the prospects of an information civilization”. *Journal of Information Technology*, Vol. 30, 2015, p. 75-89.

4 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 1, 2017.

5 QUIJANO, Aníbal. *Colonialidad do poder, eurocentrismo e América Latina*. In LANDER, Edgardo (org.). *A colonialidade do saber: eurocentrismo e ciências sociais. Perspectivas latino-americanas*. Buenos Aires: CLACSO, 2005, p.119.

6 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 87, 2017.

7 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 96, 2017.

8 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 102, 2017.

9 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 110, 2017.

10 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 88, 2017.

In colonialism, we had tangible and concrete natural - and “non-white” human - resources, which, through a legal-cultural structure created by the colonizer, were appropriated, exploited and extracted. In data driven economy, we have an intangible and abstract social resource, which through a legal-cultural structure created by the Global North¹¹, is being appropriated, exploited, and extracted by technology companies, maintaining the coloniality of power. There is a data coloniality in data driven economy, perpetuating the same hierarchies of class, race, gender, and nationality in the world of work.

Who does produce these data? How are they produced? How are they valued? Who does own and sell these data? With these questions, we want to stress the legal concept of work and question the spatial distribution of the value that heteromation generates. As in colonialism, the worker in data coloniality is not homogeneous and is not exploited in the same way.

Therefore, in the first section of this article, we seek to analyze the impact of algorithms in the world of work by demonstrating how generate data can be defined as unpaid labor, denominated heteromation. Afterwards, we explain data coloniality, describing how data extracted through heteromation, which is sold to technology companies, maintain the power structures of class, race, gender, and nationality that were created during colonization. Finally, we demonstrate how Law has been acting against data coloniality, analyzing some responses established by the EU General Data Protection Act (GDPR) and the Brazilian General Data Protection Law (LGPD – Law n. 13.709).

In conclusion, we understand that legal regulation of data is still made in a privatistic and personal perspective, disregarding the epistemology of social rights, including Labor Law. Labor Law continues to ignore data coloniality in labor relations, disregarding heteromation. In that way, it is urgent to apply decoloniality of knowledge¹² in Labor Law, with the redefinition of the legal concept of work, time and value in data driven economy.

11 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 1, 2017.

12 According to Mignolo, the coloniality of power, in programmatic terms, proposes a project of “detachment” from hegemonic knowledge. Thus, the decolonization of knowledge is a project of epistemic detachment in the social sphere, as well as in the academic sphere, that is a dimension of the social one. MIGNOLO, Walter. *Desobediencia epistémica: retórica de la modernidad, lógica de la colonialidad y gramática de la descolonialidad*. Buenos Aires: Ediciones del Signo, 2010.

2. ALGORITHMS IN THE WORLD OF WORK: THE CASE OF HETEROMATION

Algorithms play a central role in the world of work. Management is highlighted through algorithms, which are expressed by mathematical organizational practices carried out by non-human agents. Companies use algorithms to monitor the presence and performance of employees, to control their work and cultural habits, decreasing the costs and time related to human management¹³. Therefore, algorithm's role in the world of work is not only relevant for *gig-economy*, because digital management controls all dimensions of worker's life.

Labor relations, in the context of data driven economy, are under-regulated by Law. And it is in this case that the discourse of heteromation takes over. Ekbia and Nardi's conceptualization of 'heteromation is the extraction of value from low-cost or unpaid labor in computer-mediated networks'¹⁴. Automation is also accompanied by the emergence of 'heteromated labor in which the human operates on the margins of the machines. While automated systems relieve humans of labor, heteromated systems demand it'¹⁵.

Heteromation represents for all purposes a new mechanism 'for accumulating wealth'¹⁶: a new process of capital accumulation based on moments of economically valuable labor that return truly little to the worker but sustain powerful technology companies¹⁷. 'Heteromation is consistent with the labor theory of value; capital uses computing to extract low-cost or no-cost labor in networks to sustain the growth of profits'¹⁸. It is a labor relation in which value is extracted for others¹⁹.

13 PIERANNI, Simone. "L'algoritmo manager ti licenzia per errore. E non puoi protestare". L'Espresso, n. 14, 2021, p. 80.

14 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 1, 2017.

15 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 32, 2017.

16 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 1, 2017.

17 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 1, 2017.

18 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 32, 2017.

19 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 33, 2017.

This is how technology companies can generate *surplus* value²⁰ without a reasonable number of employees²¹.

Heteromation includes the creation of data and content on social media, but also customer self-service activities, which replace jobs in banks, airport counters, supermarket checkouts, allowing the replacement of visible, concrete, and paid work – albeit low-paid value – for an invisible, abstract, and unpaid labor of users of digital services. In this sense, job losses are real, but work does not disappear, it only changes in space²².

Therefore, heteromation generally involves hidden labor, often unbeknownst to workers themselves, who are unaware that, for example, their social media activity may be transformed into commodities sold for advertising²³. Ekbia and Nardi point out that a lot of value in the digital economy is extracted from simple use, through social networks, for example²⁴. ‘The use of a product or technology by any user increases the product’s or technology’s value for other users, and therefore a large installed base of users is positively valued by financial markets’²⁵. As part of their analysis, they suggested that a distinction should be drawn between heteromated labor (or work) and heteromated use – that some of these relationships are better seen not as acts of ‘production’ but as acts of consumption²⁶.

In summary, heteromation can be understood as a computer-mediated mechanism of extraction of value from various forms of human labor through an inclusionary logic, active engagement, and invisible control. These key attributes of heteromation – inclusion, engagement, and invisibility - make it

20 MARX, Karl. O capital. [Livro I]. Crítica da economia política. O processo de produção do capital. São Paulo, Boitempo, 2ª edição, 2013, p. 160.

21 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 35, 2017.

22 SADOWSKI, Jathan. “When data is capital: Datafication, accumulation, and extraction”. Big Data & Society. June 2019: p. 1–12.

23 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 35, 2017.

24 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 37, 2017.

25 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 37, 2017.

26 EKBLA, H; NARDI, B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 38, 2017.

at once novel, powerful and dangerous²⁷. To some extent, each of us, even if we never post messages, images, or videos, are producing data and metadata²⁸.

And why do we legally consider heteromation as work? We know that the fact that heteromation is made invisible does not disqualify this activity as labor, such as care work, which is still solemnly ignored by Labor Law. Like care work, heteromation is not always contractually mediated and often lacks an identifiable entity that benefits from this activity – such as a single employer. So why do we consider care and heteromation as work?

Because both involve the consumption of human energy that generates value over time. Therefore, we are talking about the concept of productive work, addressed by Marxist theory and by Law, which generates exchange value, but not only from it. We are talking about other value's dimensions: economical, but also cultural, social, and affective. We are talking about types of work that can consume intangible values of our existence, which cannot be measured by Labor Law legal institutes of modernity, such as the working day, or regulated by an externalized contract. We are talking about a kind of work that, many times, does not even result in a concrete activity. But even so, they are values and times lived by subjects, which require energy, demand concentration, and generate consumption of our bodies.

By expanding the legal concept of work through the pluralization of value, not restricting ourselves to the mercantile-quantitative perspective - we are using Marxist theory as regards the concept of abstract work²⁹ - but not only it. Abstract labor refers to the amount of human labor needed to produce the use value of a commodity, which can be something immaterial, such as data. Therefore, work is the consumption of energy from our body over time, that not only generates *surplus* value, but also generates value for the sustainability of lives³⁰, that is, it meets any type of desire or need of capitalist society.

27 EKBIA H., NARDI B. Heteromation, and Other Stories of Computing and Capitalism. MIT Press, p. 39, 2017.

28 FACHIN Patricia, “O trabalho digital é o ingrediente não secreto da inteligência artificial”. Entrevista com Antonio Casilli, in IHU On-Line, 2021.

29 MARX, Karl. O capital. [Livro I]. Crítica da economia política. O processo de produção do capital. São Paulo, Boitempo, 2ª edição, 2013, p. 160.

30 CARRASCO, Cristina. O paradoxo do cuidado: necessário, porém invisível. In: VILELLA, Shirley; JÁCOMO, Márcia Larangeira (orgs.). Orçamentos sensíveis a gênero: conceitos. Brasília: ONU Mulheres, 2012. p. 251-285.

The concept of work in the data driven economy can no longer be restricted to the legal elements of modernity: visible remuneration; conscious contract; direction of labor activity by a human body. It is crucial to focus on the role of this labor activity in the broader context of data economy. In this way, heteromation is not an accidental or isolated process, but represents a reconfiguration of value and work for capital accumulation.

In addition to heteromation process, it is also urgent to analyze the discriminatory aspect of data driven economy, regarding stereotypes and prejudices on gender identity, sexual orientation, ethnic origin, that maintain the coloniality of power. The narratives that justify data extractivism are as universalistic as those of colonial modernity³¹. We are told that the expropriation of human life through data represents economic growth; avoids discrimination; that brings human connection; democratic spaces and redistributive justice³².

According to recent research³³, data driven economy reproduces intersectional disparities of gender, race, class, and nationality, which are being incorporated by artificial intelligence, through algorithmic machine learning techniques. The example of Google that started labeling black people in photos as gorillas; Nikon's photography software that warns the photographer that someone blinks when they have people with Asian traits; or artificial intelligence represented by Apple's Siri voice that doesn't know what to say when the female cell phone owner tells it she was raped³⁴: artificial intelligence does not prevent human

31 COULDRY, Nick; MEJIAS, Ulises. *The costs of connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*. Stanford, California: Stanford University Press, 2019, p. 69.

32 COULDRY, Nick; MEJIAS, Ulises. *The costs of connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*. Stanford, California: Stanford University Press, 2019, p. 72.

33 See KIM, Pauline. "Data-Driven Discrimination at Work". *William & Mary Law Review*, Vol. 48, 2017. p. 857-936. MANN, Monique, MATZNER, Tobias. "Challenging algorithmic profiling: The limits of data protection and anti-discrimination in responding to emergent discrimination". *Big Data & Society* July–December 2019: p. 1–11; FAVARETTO, Maddalena; ELGER, Bernice Simone; CLERCQ, Eva De. "Big Data and discrimination: perils, promises and solutions: systematic review". *Journal of Big Data*, 2019, p. 6-12; WILLIAMS, Betsy Anne; BROOKS, Catherine F; SHMARGAD, Yotm. "How Algorithms Discriminate Based on Data They Lack: Challenges, Solutions, and Policy Implications". *Journal of Information Policy*, 2018, Vol. 8, p. 78-115; SILVA, Tarcízio. *Racismo Algorítmico em Plataformas Digitais: microagressões e discriminação em código*. In: SILVA, Tarcízio (org). *Comunidades, Algoritmos e Ativismo Digitais: olhares afrodiáspóricos*. São Paulo: LiteraRUA, 2020

34 ZHAO, Jieyu; WANG, Tianlu; ORDONEZ, Vicente; CHANG, Kai-Wei; YATSKAR, Mark. "Men Also Like Shopping: Reducing Gender Bias Amplification using Corpus-level Constraints".

error and, what is more serious, can recreate the intersectional discrimination imposed by coloniality of power.

Therefore, far from having neutral results and reducing labor discrimination and inequality, the data driven economy reproduces intersectional oppressions imposed by colonization, which persist to this day. There is a data coloniality in the world of work.

3. WHAT IS DATA COLONIALITY?

The data extracted through heteromation, which is sold to technologies companies, maintaining the power structures of class, race, gender, and nationality that were created during colonization, is what we denominate data coloniality. We call it coloniality, not colonialism. Coloniality allows us to understand the continuity of colonial domination forms beyond the end of historical colonialism³⁵.

If historical colonialism was an appropriation of land, bodies, minds and natural resources, data coloniality can be understood as an appropriation of social resources in all life's dimensions. Data relationships are new types of human relations that give tech companies a comprehensive view of all our forms of sociability, allowing human life to become a production factor for capitalism³⁶.

Just as historical colonialism invaded all spaces of the colonized's life, starting from the economic and occupying the political, psychological, and spiritual dimension, the coloniality of data makes our entire existence available to capitalism, but in high speed and without concrete geographical space's limitation³⁷.

The narratives that justify the extraction of data by technology companies are as universalist as those of colonial modernity. Mejias and Couldry³⁸ list

Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 2979–2989. Copenhagen, Denmark, September 7–11, 2017.

35 LUGONES, María. “Colonialidad y género”. *Tabula Rasa*. no .9, julho-dezembro. Bogotá, 2008, p. 75-101.

36 COULDRY, Nick; MEJIAS, Ulises. *The costs of connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*. Stanford, California: Stanford University Press, 2019, p. 70.

37 COULDRY, Nick; MEJIAS, Ulises. *The costs of connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*. Stanford, California: Stanford University Press, 2019, p. 102.

38 COULDRY, Nick; MEJIAS, Ulises. *The costs of connection: How Data Is Colonizing Human*

these discourses: a. Messianic-developmental narrative, which presents the coloniality of data as a civilizational project, carried out on behalf of subaltern subjects in the search for progress, security and democracy; b. Cultural narrative, which promotes data extraction as a collective “sharing”, but reduces the value of privacy and encourages self-image egocentric competition, destroying the solidary and anti-capitalist concept of common; c. Technocrat narrative, which frames data extraction as a legitimate objective of science, entrepreneurship and human creativity. d. And, finally, the narrative that interests us here: legal-economic narrative, which frames the data as a property without owner and without value, ignoring the work that we do to produce them.

Who does produce these data? How are they produced? How are they valued? Who does own and sell these data? With these questions, we want to stress the legal concept of work and question the spatial distribution of the value that heteromation generates. As in colonialism, the worker in data coloniality is not homogeneous and is not exploited in the same way.

In the colonization of the Americas, according to Quijano³⁹, the idea of race associate with the skin color was created: it was an imposition of a new geopolitical identity to enable colonial domination through a racial division of labor. “Indigenous”⁴⁰ were confined to servitude; “blacks” were enslaved; European white women were imprisoned in reproductive work; “black” and “indigenous” women were sexually objectified, raped, and exploited in domestic enslavement; “black” women were mortified as slaves in rural areas and mining slavery.

Only white European men could perform free work. This means that in the colonization of Latin America there was an exclusive association of male whiteness with free work, with wages, with the standard of human. This racial division of labor had remained in contemporary capitalist relations, expressing itself in an almost exclusive association of male whiteness with the protected employment in data driven economy.

Life and Appropriating It for Capitalism. Stanford, California: Stanford University Press, 2019, p. 103.

39 QUIJANO, Aníbal. Colonialidad do poder, eurocentrismo e América Latina. In LANDER, Edgardo (org.). A colonialidade do saber: eurocentrismo e ciências sociais. Perspectivas latino-americanas. Buenos Aires: CLACSO, 2005, p.119.

40 QUIJANO, Aníbal. Colonialidad do poder, eurocentrismo e América Latina. In LANDER, Edgardo (org.). A colonialidade do saber: eurocentrismo e ciências sociais. Perspectivas latino-americanas. Buenos Aires: CLACSO, 2005, p.120.

According to Couldry and Mejias, cross-border data exchanges accounted for an overall traffic of 211.3 terabytes per second (TBps) in 2014 and was valued at \$7.8 trillion and that year. But a closer look reveals that exchanges are highly uneven: while flows between North America and Europe jumped from 1,000 terabytes per second in 2005 to more than 20,000 terabytes per second in 2014, the flow between North America and Latin America, for example, only increased from 500 terabytes per second to 5,000 terabytes per second during that same period. The flow between Asia and Africa went from e 50 terabytes per second to e 500 terabytes per second in the same period.

This means that while a large part of the “non-white” bodies remains marginalized from digital spaces, in poverty and informal work, without any recognized rights, white people from the Global North – but also those from the Global South of higher classes – navigate in high-speed networks, producing data.

Therefore, there is an *external dimension* of exclusion regarding data coloniality, which prevents “non-white” and poor workers from the Global South from accessing high-speed networks as users. Colonialism’s racial and geopolitical division of labor remains in heteromation: white people continue to occupy free and privileged work, whether in the protected employment or in heteromation, and have their data captured and processed by technology companies in the Global North, to influence culture, politics, economy, and livelihoods of “non-white” people in the Global South.

“Non-white” people in the Global South have every aspect of life commodified, but without the right to the same participation in network spaces as dominant users or as protected employees, and without the right to any share of wealth or decision-making power in social relations.

This also causes a major problem regarding the diversity of data captured by this model of algorithms for decision-making, which are not representative in terms of gender, race, class and, therefore, do not proportionally represent the working class. Those who live on the margins of big data, without having access to high-speed internet, have their lives less processed by the data economy.

So, the big question is while algorithms promise objective data analysis, we must understand whether the discriminations they can introduce are even greater than the human biases they claim to avoid⁴¹. As Pauline Kim’s studies

41 KIM, Pauline. “Data-Driven Discrimination at Work”. *William & Mary Law Review*, Vol. 48,

demonstrate⁴², algorithmic decision models are unlikely to be less discriminatory than those of human decisions because algorithmic choices are based on limited data. What a predictive algorithmic decision model learns depends on the data to which it has been exposed. Algorithms only incorporate information present in their database. However, humans who depend on them will accept their choice based on extremely restricted information as a neutral and universal result.

Thus, there is also an *internal dimension* of data coloniality. The Global South workers who can cross the border of digital exclusion have their data captured, altered, and sold by a tech company from the Global North. Most of all cross-border data traffic passes through the United States and is subject to surveillance and alteration methods that this government deems necessary. According to 2017 figures⁴³, three of the largest revenue IT companies in the world were headquartered in the US. It is no coincidence that the United States and other developed countries, in the name of technology, progress and democracy, have been pressuring the countries of the South to open their digital borders.

The Global North still assumes the role of controlling the South: data flows continue to replicate the movement of resources from the colony to the metropolis. The North holds the means of data processing and the colonized only provides the “raw” data. The data processing, analysis, and creation of value-added products that the colonized must buy at a disadvantage are controlled by the colonizer. In this sense, the coloniality of data reifies the gentrifications of class, race, and geopolitics of colonial capitalism, lowering the ways of life, knowledge, and culture of the South, transforming all the dimensions experienced into inputs for capitalism, without the distribution of their wealth.

Therefore, the data that drives *the data driven economy* are not neutral: they are driven by power relations and are extracted by capitalist-colonial processes experienced by real people which maintains the historical subalternity of the same Global South workers.

2017. p. 857-936

42 KIM, Pauline. “Data-Driven Discrimination at Work”. *William & Mary Law Review*, Vol. 48, 2017. p. 857-936

43 EKBIA, H; NARDI, B. *Heteromation, and Other Stories of Computing and Capitalism*. MIT Press, p. 96, 2017.

4. LEGAL SOLUTIONS AGAINST DATA COLONIALITY

Algorithms have a deep impact on the world of work, maintaining coloniality of power in social relations. Therefore, a reflection on the power of control over workers cannot be ignored. In Italy, the Law 183 of 2014 contained, among other issues, an authorization for teleworker's control regulation. The Legislative Decree 151 of 2015 introduced new features regarding this remote control. In general, the use of tools for controlling teleworkers were allowed for “organizational and production needs” or for “work safety”, but also for the “protection of company assets”.

According to the Legislative Decree 151 of 2015, companies with units located in different provinces of the same region (or in several regions) could stipulated collective agreements on this subject not only with the “Unitary Union Representation” (RSU) and with the “Company Trade Union Representation” (RSA)⁴⁴, but also with the most representative trade unions at national level. If there is no collective agreement regarding this matter, the regulation could take place with a prior authorization of the Ministry of Labor and Social Policies.

Regarding the digital tools used for working or for recording employee's access and attendance, it is not required that the remote control be motivated by “organizational and production needs”, “safety at work”, and “protection of company assets”. Finally, new rules are introduced to guarantee workers aimed at establishing that all information collected by the employer can be used for all purposes related to the employment relationship under certain conditions.

In European Union, the art. 88 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, on the protection of natural persons regarding the processing of personal data and on the free movement of such data, establishes that States may issue special rules aimed at guaranteeing the protection of the rights and freedom of employees during the processing of data in the context of the employment relationship.

⁴⁴ In Italy, RSA – *Rappresentanza Sindacale Aziendale* - and RSU - *Rappresentanza Sindacale Unitaria* - are two employee's collective organizations. The RSU is elected by all workers in the company, regardless of their membership in a trade union. Instead, the RSAs are elected by members of a particular trade union. Therefore, the RSU have the general representation of the workers, while the RSA protect only the members of the trade union. GIUGNI, Gino. *Diritto Sindacale*. Bari: Cacucci Editore, 2008, p. 84.

This can be done through collective agreements or legislative provisions. The EU General Data Protection Act (GDPR) establishes that the worker control activities are carried out in a context of transparency and adequate protection of personal data. The control by the employer, and the processing of employee data, can, in fact, take place in a multiplicity of phases: evaluation of candidates and hiring, evaluation of work performance, planning and organization of work, health and safety of the working environment, protection of the employee's assets, termination of the employment relationship.

Therefore, it is important to verify the logic underlying the automated decision-making processes, for the consequences that occur for the interested party for the purposes of the application of anti-discrimination rules. In this regard, the European Union, in the past years, has issued some directives⁴⁵ that have governed equal treatment and the safeguarding of dignity in the workplace.

The art. 22 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation - GDPR) excludes the hypothesis of making effective decisions on the basis of automated processes that could create legal effects for the interested party except with the presence of guarantee standards. It is therefore the right of the worker not to be subjected to mechanisms of this type. In this the GDPR places itself in an important plan to prevent, for example, job selection processes through algorithms.

Furthermore, the GDPR provides that the algorithmic assumptions, exceptions or not, cannot be based on sensitive data relating to health, sexual orientation, ethnicity, membership of a trade union, provided that the interested party does not agree or do not well-founded reasons of public interest. In this case, the adoption of adequate measures for the protection of the rights and freedoms of the interested party is ordered⁴⁶.

45 These are some directives that have been implemented: Council Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin; Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation; Directive 2006/54/EC Of The European Parliament and of the council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation .

46 ALOISI A. DE STEFANO V. "Il tuo capo è un algoritmo". Contro il lavoro disumano, 2020, pp. 57-58.

The resolution of the European Parliament of 15 June 2017 (2017/2003 (INI)) on a European agenda for the collaborative economy of which the main sectors are those of housing sharing and transport calls on Member States to guarantee adequate social security for self-employed workers, who are key players in the digital labor market. Further, it calls on the Member States to develop new protection mechanisms, where necessary, to ensure adequate coverage of online platform workers, non-discrimination, and gender equality as well as to share best practices at European level.

The “Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data” (Convention 108) had as its objective the protection of the right to respect for private life and is the only legally binding multilateral agreement in the field of the protection of personal data. With the Protocol amending the Convention on the protection of individuals about the automatic processing of personal data, done in Strasbourg on 10 October 2018, (10923/2018 – C8-0440/2018 – 2018/0238 - NLE) it is proposed to modernize and harmonize the mentioned Convention, to better address the challenges posed by the technological development in the field of privacy protection, as well as its application.

The Protocol establishes a solid and flexible multilateral legal framework, intended to facilitate the cross-border flow of data, while offering effective guarantees in case of use of personal data. Among the innovations introduced by the Protocol: the expansion of the categories of data known as “sensitive”, which will now also include genetic and biometric data, those indicating membership of trade unions and ethnic origin; the obligation to notify the data breach; greater transparency regarding data processing; new rights of people with regard to decision-making processes based on algorithms, which take on particular relevance in the development of artificial intelligence; strengthening of the responsibility of data controllers and of the powers and independence of the authorities responsible for data protection data and legal bases necessary for international cooperation.

The Directive (EU) 2019/1152 of the European Parliament and of the Council of 20 June 2019 on transparent and predictable working conditions in the European Union (PE / 43/2019 / REV / 1), introduces new minimum rights and new information rules to be provided to workers with regard to their respective working conditions, pursuing the objective of responding to the new

challenges of the labor market about demographic developments, digitalization and new forms of work in order to make working conditions more transparent and predictable throughout the European Union.

The directive applies to all workers in the European Union who have a contract or an employment relationship as defined by law, by collective agreement or by the practices in force in each Member State, considering the case law of the Court of Justice of the EU. The employer must inform the workers in writing at the latest within one week from the first day of work, of the essential elements of the employment relationship. The directive recognizes a series of minimum rights in favor of workers with reference to the length of the probationary period, the possibility of accepting employment with other employers outside working hours, the adoption of all necessary measures to prevent practices abusive in on-call work, to the possibility of requesting one form of work with more predictable and safe conditions with six months of service, free training for the worker.

The Council Recommendation of 8 November 2019 on access to social protection for employed and self-employed (2019/C 387/01) defines objectives to protect new workers in the Member States, while fully respecting national systems. Although it is not legislative, this Recommendation can support Member States in adapting social protection systems, to make them more effective in protecting workers who - in the light of changes in the labor market - often remain without the minimum safeguards. With all these tools, the European Union intends to give some answers starting from the protection for forms of work, including those concerning the digital world.

Regarding to Latin America, the Brazilian General Data Protection Law (LGPD – Law n. 13.709) is the normative framework. The LGPD main concern is protect personal data, using the EU GDPR as a legal reference, despite the reality of the European Union and Brazil being completely different.

In the same direction of the EU GDPR, Brazilian's LGPD lists nine fundamental rights that data subjects have, which includes: the right to confirmation of the existence of the processing; the right to access the data; the right to correct incomplete, inaccurate or out-of-date data; the right to anonymize, block, or delete unnecessary or excessive data or data that is not being processed in compliance with the LGPD; the right to the portability of data to another service or product provider, by means of an express request; the right to delete

personal data processed with the consent of the data subject; the right to information about public and private entities with which the controller has shared data; the right to information about the possibility of denying consent and the consequences of such denial; and the right to revoke consent.

However, LGPD and the GDPR have different positions regarding the motivation for using a data subject's information, which includes "to protect credit", inserting a financial perspective into Brazilian data protection. LGPD was designed for the business sector and does not mention any relation between data and labor.

The legal framework for data protection in Brazil had always been developed based on its constitutional and Consumer Protection Code grounds, only for privacy provisions⁴⁷. Therefore, the Brazilian legal regulation of data is still made in a privatistic and personal perspective, disregarding the epistemology of social rights.

5. CONCLUSIÓN

Based on what has been analyzed, it is necessary to look at the generation, treatment, and alteration of data to verify the results of the algorithmic analysis on which machine learning solutions are based. All these elements have a considerable social and economic impact and carry many social risks. For this reason, artificial intelligence needs to be regulated also by Labor Law to break the circuit of coloniality of power.

It must be an algorithmic governance done with responsibility, transparency, and awareness. Regarding to our data, it is important to establish legal control to respect our privacy. However, the legal discourse cannot be only about privacy: algorithms play a central role in the world of work.

Jobs are becoming more precarious. The ILO Report on World Employment and Social Perspectives for 2020⁴⁸ informs us that 61% of the world's workers are informal. More than two billion workers perform activities that are

47 DONEDA, D., MENDES, L. Data Protection in Brazil: New Developments and Current Challenges in LEENES, R; GUTWIRTH, S. DE HERT, P. *Reloading Data Protection Multidisciplinary Insights and Contemporary Challenges*. Springer Dordrecht Heidelberg, London-New York, 2014, p. 3.

48 ILO. *World Employment and Social Outlook: Trends 2020*. International Labour Office. Geneva: 2020.

not protected by employment relationships⁴⁹. In the three last decades, income inequality between workers from the South and from the North has increased. The Report also shows that the number of bodies that work and yet live in inhumane conditions is expected to increase in 2021⁵⁰.

Therefore, we should take these things into account as we think about policies and social movements for the future⁵¹. Innovation is only positive if it is involved in a process with stakeholders. In this negotiation process, Labor Law should have as its object heteromation, data extractivism and algorithms discrimination. “Negotiating the algorithm” is a primary goal for workers in data driven economy⁵².

We must continue to protect work and its transformations, but also playing a political role to affirm a new social model capable of accompanying this mutation. In practice, we must think about forms of participation in the “design phases”⁵³, including rethinking Labor Law’s epistemology through dissident lenses.

In that way, it is urgent also apply decoloniality of knowledge⁵⁴ in Labor Law, with the redefinition of the legal concept of work, time and value in data driven economy. The task of making coloniality in Labor Law be heard is not an easy one. Nonetheless, it is not enough to denounce the complicity of Labor Law with the logic of coloniality. Because decoloniality of knowledge, due to its radical nature, cannot be a theoretical whisper.

It is crucial to project the voice of legal decoloniality in Labor Law with the review of its epistemic subject. With non-translating the mercantile time as the only time that generates value. With the demystification that only those who perform productive work are entitled to a minimum income. With the application of the decolonial method in labor legal education. With the ecosys-

49 ILO. World Employment and Social Outlook: Trends 2020. International Labour Office. Geneva: 2020.

50 ILO. World Employment and Social Outlook: Trends 2020. International Labour Office. Geneva: 2020.

51 FACHIN Patricia, O trabalho digital é o ingrediente não secreto da inteligência artificial. Entrevista com Antonio Casilli, in IHU On-Line, 2021.

52 DE STEFANO Valerio, “Negotiating the algorithm”: automation, artificial intelligence and labor protection, ILO Employment Working Paper, No. 246, 2018.

53 MANCINI, Chiara. “Contrattare l’algoritmo”. Entrevista a Landini, in Idea Diffusa, 2019.

54 MIGNOLO, Walter. Desobediencia epistémica: retórica de la modernidad, lógica de la colonialidad y gramática de la descolonialidad. Buenos Aires: Ediciones del Signo, 2010.

temic expansion of the concept of the work environment. With the critical reappropriation of techniques of data gathering and of bio-surveillance at work. With feminist intersectional strikes. Because we can no longer mimic the legal discourse of the modern/colonial system.

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