CHAPTER 14

Beyond Mechanical Turk: The Work of Brazilians on Global AI Platforms

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Introduction

'Artificial Artificial Intelligence', the slogan of Amazon Mechanical Turk (AMT), a global AI platform, is as ironic as the history of the 19th century Mechanical Turk itself. But it is less ironic than perverse to see that part of the profit of one of the owners of Cloud Empire (Couldry and Mejias 2019) is related to the crowd work of millions of workers around the world.

The slogan also reveals the simplistic nature of the debates about the future of work and artificial intelligence (AI) that carry persistent representations of a 'general artificial intelligence' driven by Hollywood imagery. These discourses point to visions of AI playing a key role in the full automation of work, whether in positive or negative frameworks (Dyer-Witheford, Kjosen and Steinhoff 2019).

These narratives make inequalities and ghost work (Gray and Suri 2019) invisible, even though crowdsourced labour performed by humans, in fact, supports AI. Thus, there are tasks that might, in theory, be performed by AI, but are cheaper and/or quicker to simply outsource to human workers' (Woodcock and Graham 2019, 58). However, AMT workers are not the only ones supporting AI. Companies like Appen, Lionbridge, Mighty AI, Clickworker and Spare5 also play a key role as data trainers for AI, with a variety of work activities on their platforms, including data training for self-driving cars. The

discourses of these platforms propagate meanings of future and progress. Appen's slogan, for example, is: 'confidence to deploy AI with world-class training data – artificial intelligence will improve the world'. This helps to consolidate images of digital labour, AI and data among workers (Soriano and Cabanes 2019; Beer 2019).

Work behind artificial intelligence is called 'ghost work' (Gray and Suri 2019), 'clickwork' (Casilli 2019) and 'micro-work' (Tubaro and Casilli 2019; Lehdonvirta 2016). These metaphors are attempts to name work activities on AI platforms. They are not definitive notions, but just illustrations. For instance, the fact that this work consists of individual, compartmentalised 'tasks' lasting perhaps only seconds or minutes, does not make it 'micro'. In a similar way, these workers do more than just click on ads. On the one hand, the multiplicity of tasks involves audio transcriptions and translations, describing images, recording videos and photos, and so on. On the other hand, we understand that work activities, whatever they may be, involve the entire (material) body of workers (Huws 2014).

Whatever the name, these people work for global artificial intelligence platforms. The global character of these systems points towards an important factor in the complexification of the human work behind AI: the platforms' geopolitical dimension. Fuchs and Sandoval (2014) point to a new international division of labour (NIDL). However, work on global AI platforms is different from the circuit of labour involving the iPhone, for example (Qiu, Gregg and Crawford 2014). On the global AI platforms there is no division between lithium battery production in one place and software production in another, although they depend, in a sense, on this circuit of labour and these digital infrastructures. In this case, there are a few companies from the Global North managing and controlling a crowd of workers from many countries in the world, mainly from the so-called Global South.

Crawford and Joler (2018) show connections among human labour, data and planetary resources, including the production of data for AI as a circuit of digital labour (Qiu, Gregg and Crawford 2014): physical labour of mine workers, labour in distribution centres, crowdsourced labour on global AI platforms, and so on (Crawford and Joler 2018). This means highlighting the material dimensions of the work behind AI, from workers' 'human intelligence' to media materialities, digital infrastructures, with diverse impacts, including geological (Parikka 2015; Milan 2018; Murdock 2018).

We agree with the notion of the 'planetary labour market' (Graham and Anwar 2019). Global AI platforms do not eliminate physical spaces and are dependent on material infrastructures. The planetary scale of these platforms means that 'labour markets help clients operate unboundedly and transspatially, and allow them to reconfigure the geography of their production networks for almost zero cost' (Graham and Anwar 2019, 28). The workers, although they 'can sell their labour power globally, [they] are tethered to the

locales in which they go to bed every night' (Graham and Anwar 2019, 29). According to the Online Labour Index (OLI) of the University of Oxford, the country of origin of the largest number of online freelance tasks is the United States, and the country with the largest number of online workers is India.

Thus, understanding the inequalities in work for global AI platforms means going beyond AMT and workers from the Global North. In a digital economy, there are inequalities involving local workers and global platforms. There is no 'digital labour universalism' or a homogeneous and unique notion of global workforce. There are, in fact, diverse work and AI scenarios around the world.

The aim of this chapter is to analyse the work of Brazilians on global AI platforms, mainly Appen and Lionbridge, from the workers' point of view, understanding platform labour and the platformization of labour as a secret ingredient in automation and contextualising platform labour in terms of the Global South (Grohmann and Qiu 2020). The Latin American scenario is less well known in academic research on labour and AI in the Global South in relation to countries like the Philippines and India. The focus of this research in Brazil is not intended to argue a singularity of this country, but to show the existence of other realities beyond Global North that are also invisible academically from critical research on AI.

In the following section, we discuss platformization of labour and AI. Then, we present the methodology, with interviews and a survey with workers, together with observations of Facebook and WhatsApp groups. The topics of analysis are: communication among workers, difficulties of work, lack of infrastructural reliability, workers' strategies, definition of work and understanding of AI. The results reveal the complexity of working on global AI platforms and AI imaginaries.

Platformization of Labour and Artificial Intelligence

There is no AI without 'ghost work' (Gray and Suri 2019). Conversely, the work that supports AI is only possible with the existence of digital platforms. 'Platform' is the term that refers to the sociotechnical infrastructures of digital conglomerates and that connect different parts – State, companies, consumers, workers, and so on (Srnicek 2016). In the literature on digital media, it highlights the performative character of these structures (Introna 2016). Online platforms are considered mediators that not only enable or facilitate certain practices, but also actively shape, transform, and distort content, relationships, understandings, etc. (Gillespie 2014). Simultaneously, that contemporary sociotechnical model for organising practices inserts processes driven by algorithms and digital data into different contexts (Van Dijck, Poell and De Waal 2018). The algorithm-driven logic that underpins these platforms is the confluence of different factors – business models, user data, algorithms, data centres,

servers, etc. Thus, digital platforms are infrastructures that depend on data and algorithms and which present values and standards inherent in their designs.

Van Doorn and Badger (2020), for instance, highlight the role of data assets and meta-platforms in platform labour. However, as Srnicek (2016) argues, there is not just one type of platform. The role of algorithms and data in platform labour depends on its mechanisms and ways of extracting value (Sadowski 2020). In the case of AI, platforms are the places for many workers to produce and circulate data to automate processes, that is, towards AI (Beer 2016, 2019). Ghost work behind AI is a way of mining workers' process for data (Neff, McGrath and Prakash 2020). Thus, working for global AI platforms is a type of data labour for automation.

There is no platform without moderation, as state Gillespie (2018) and Roberts (2019). More recently, Gillespie (2020) highlights the promise of 'the promise of AI' and the question of scale regarding data. 'The claim that moderation at scale requires AI is a discursive justification for putting certain specific articulations into place – like hiring more human moderators, so as to produce training data, so as to later replace those moderators with AI' (Gillespie 2020, 2). This means understanding the heteromation of labour (Ekbia and Nardi 2017) on global AI platforms.

The platformization of labour, in line with Casilli and Posada (2019) and Van Dijck, Poell and De Waal (2018), is linked to the growing dependence on digital platforms to get and/or maintain work activities. This process is a social synthesis of others: datafication, financialisation and neoliberal rationality (Sadowski 2020, Dardot and Laval 2013). Platform labour requires large-scale data extraction and collection for its surveillance and algorithmic management mechanisms to be successful. Sadowski (2020) states that there are three key mechanisms of rentier capitalism platforms: data extraction, digital enclosure and capital convergence. Moreover, the data is a form of capital for platform companies, expropriating and colonising workers' resources, especially in the Global South (Couldry and Mejias 2019).

The platformization of labour does not materialise in the same way for different actors and social institutions. There is a heterogeneity of workers with relation to gender, race, class and geography issues. This heterogeneity means not only differences, but also inequalities that structure the platform labour (Van Doorn 2017, Grohmann and Qiu 2020). According to Abilio (2020), platform labour is generalisation and appropriation of the livelihoods of peripheral populations by the platform companies.

In Brazil – the focus of this chapter – gig work is not an exception, but historically the way of life of most workers, an ordinary state. The change is that gigs are now platformized. According to Grohmann and Qiu (2020, 5), 'analysing platform labour in the South means that patterns in the North are often erroneously assumed to have also existed in Latin America, Africa and Asia's developing regions, as if labour precarity is a novel phenomenon'. Thus, the

theme of regulation in platform labour is very different in a Latin American context, as workers generally do not want to become regular employees (Abilio 2020). Platform couriers and drivers, for instance, want to have the feeling of autonomy, flexibility and self-management of their own work, which makes it a challenge to think about the regulation of platform labour. This does not mean, however, that they are not organising themselves into unions, associations and strikes (Grohmann et al. 2020; Grohmann and Alves 2020).

The platformization of labour intersects social and geographical contexts with issues around platform materialities and design. Global AI platforms work differently in relation to companies like Uber or Deliveroo, although they have similar mechanisms, such as algorithmic management and surveillance (Woodcock and Graham 2019). First, companies and workers can be located in different parts of the world, and workers often work from their own homes. But this does not necessarily mean that the tasks performed by workers are global. Sometimes they are located in the worker's neighbourhood, city or country, such as advertising analysis or text translation tasks. Second, payment methods vary. AMT, for example, only pays US and Indian workers in cash. In Brazil, workers receive Amazon store credit. Other companies, like Appen and Lionbridge, pay workers in dollars, which makes workers see themselves as part of 'world-class work' (Soriano and Cabanes 2019). This means that there is no homogeneity in practices across global AI platforms. According to Tubaro, Casilli and Coville (2020, 2), 'some platforms such as Mechanical Turk cater to a diverse range of corporate needs, while others specialise in AI services'. Thirdly, there are different worker perceptions regarding the platforms' objectives. At Deliveroo, for example, the courier knows that he/she will deliver food from a restaurant to someone. At AMT or Appen, as our analysis shows, there is production and circulation of ideas about what it means to train algorithms and 'work for AI'. In other words, this can mean alienation from the circuit of labour in global chains.

Global AI platforms accelerate the platformization of labour from the process of 'taskification of labour'. The distribution of micro tasks to the crowd workers materialises from the data labour. According to Casilli and Posada (2019, 10), 'the standardization and the fragmentation of previously complex and specialised processes are essential to run a platform ecosystem where the activities of users fit in and are synchronised with others'. There is data circulation (especially the so-called 'good data') only with the circulation of labour on global AI platforms (Beer 2016). According to Tubaro, Casilli and Coville (2020, 4), 'AI companies depend heavily on data resources, including not only raw data but also annotations that add extra meaning by associating each data point, such as an image, with relevant attribute tags.'

Dyer-Witheford, Kjosen and Steinhoff (2019) state that AI is the current general condition of production, configuring an AI capitalism. However, this means neither general AI nor full automation. Platform labour is the secret ingredient

of automation (Casilli 2019). The work on global AI platforms symbolises the 'heteromation of labour', according to Ekbia and Nardi (2017). Heteromation means keeping human beings in the system, because capitalism needs human beings, extracting value in invisible ways, with new logics of wealth accumulation. According to Ekbia and Nardi (2017), humans are doing a lot of work and machines are getting credit. The role of human beings at work is invisible, although the companies' discourse is towards valuing human beings: 'platforms tell clients that human contribution has value, but not who these humans are and in what conditions they work' (Tubaro, Casilli and Coville 2020, 10).

The intersection of platform labour and heteromation is the synthesis that the future of work will not be exactly automation, but the growing taskification of labour. According to Tubaro, Casilli and Coville (2020, 2), 'automation is still in the making and has not yet been deployed at large scale, [but] its demand for micro-tasks is already transforming the daily practices, experiences and career trajectories of thousands of workers worldwide'. This occurs, according to the authors, in processes of AI preparation, AI verification and AI impersonation. However, it is necessary to highlight that the 'taskification of labour' would not be something original or new, since the 'salary per piece' was already a reality for Marx (1894).

Research leaded by Antonio Casilli and his group has shown that AI platforms can have multiple configurations, from local start-ups to global companies – and this is the emphasis of this chapter. Tubaro, Casilli and Coville (2020) point out that there are platforms like AMT and Clickworker whose workers perform tasks in the most diverse areas and there are other platforms more specialised, ones such as Spare5 and Mighty AI (now owned by Uber), focused on data training for self-driving cars. Thus, the multiplicity of possible tasks on AI platforms shows the flexible nature of their workforce.

Most research on global AI platforms focuses on the Global North, such as Irani (2015), Milland (2017), Gray and Suri (2019) and Ludec, Tubaro and Casilli (2019) highlighting countries such as the United States and France, with a centrality of AMT. However, research by Ludec, Tubaro and Casilli (2019) reveals interesting data for research on global AI platforms outside United States. In France, there are about 500,000 workers registered in AMT. This is a much smaller number than other platforms like ClixSense (7,000,000 workers), Microworkers (1,215,829), Clickworker (1,200,000) and Appen (1,000,000). This reveals the impossibility of generalising the localised experience of AMT workers in countries like the United States. As we stated, there is no digital labour universalism.

One of the few studies that veer away from that Global North trend is Graham, Hjorth and Lehdonvirta (2017) which focuses on Africa, but was written by Global North authors and does not focus exclusively on global AI platforms. Schmidt (2019), in his research on workers that train AI for self-driving cars, finds that most of the workers are from Venezuela. There is even a Brazilian in his research sample. Schmidt's work, nonetheless, does not go further into Latin America itself.

In Brazil, Kalil (2019), and Moreschi, Pereira and Cozman (2020) researched Brazilians working at AMT. Kalil (2019) interviewed 52 people, usually single and graduate men about 30 years old. The alleged reason for work in these platforms is the need for additional income. Kalil (2019) also investigated workers from the United States (sample = 685) and India (sample = 125). Some of the workers' statements are: 'too much work, too little pay, too much exploitation' (Kalil 2019, 189) and 'I can't earn the equivalent of a minimum wage even if I work more than eight hours a day' (Kalil 2019, 189).

The research by Moreschi, Pereira and Cozman (2020) presents survey results with 149 Brazilians working at AMT and observation in a WhatsApp group. The profile is similar to the findings of Kalil (2019): White men and 29 years old. They have been formally unemployed for a long time. In addition, they cite other global AI platforms for which they work, such as Clickworker, Appen and Figure Eight. However, the research focuses only on AMT.

The authors consider the working conditions of Brazilians worse than that of countries like India due to factors such as 'the role of AMT in Brazilian turkers' economic lives, the consequences of the lack of direct payment and the importance of WhatsApp for organising' (Moreschi, Pereira and Cozman 2020, 61). This survey reveals that work of turkers is closely intertwined with the historical informality of labour in the country, a gig economy that existed prior to digital labour itself. 'As Amazon does not make a transfer to their bank account, like turkers in some other countries can [sic], the turkers in Brazil find themselves at the bottom of an unregulated market' Moreschi, Pereira and Cozman (2020, 61).

Research on Brazilians in AMT reinforces that communication also supports the organisation of workers, although still in informal solidarities (Soriano and Cabanes 2019). In the WhatsApp group, workers help each other and present a 'rhetoric that blends entrepreneurship with elements of religiosity and self-help' (Moreschi, Pereira and Cozman 2020, 53). One of the research statements reveals that workers do not want to be a 'ghost': 'I exist and I want you and others to know that' (Moreschi, Pereira and Cozman 2020, 47).

In general, the literature review shows that, on the one hand, there are connections between the tasks of workers for AI platforms in many parts of the world, with the potential for circulation of workers' struggles (Dyer-Witheford 2015; Englert, Woodcock and Cant 2020). On the other hand, there are specificities – of the Global South and, in this case, of Brazil – in relation to payment, task supply, working conditions, difficulties in accessing the platform and problems with language. The background of workers is also a central difference due to issues such as training and the legacy of the informal economy in the country.

Thus, this chapter aims to analyse something not yet explored by research: how Brazilians work on other global AI platforms such as Appen and Lionbridge, in order to highlight other inequalities involving AI and labour. From the class composition perspective (Woodcock 2019; Cant 2019), we focus here on the technical composition of the workers. This does not mean to disregard

the social and political dimensions of class struggles, but to focus the discussion on work activities.

Methodology

From February to April of 2020, we conducted exploratory research across groups where Brazilians discuss their work for global AI platforms. We understand exploratory research as a set of methodological practices developed to offer 'new and innovative ways to analyse reality' (Reiter 2017, 131). To this purpose, we provide transparent guidelines about the research process, aiming to demonstrate its reliability and validity (Reiter 2017). Based on this methodological framework, we began with a preliminary online search for content on the subject, from Brazilian blogs and YouTube channels on this topic. Regarding this content, and considering the previous studies in the literature about digital labour in Brazil (Moreschi, Pereira and Cozman 2020; Abilio 2020; Grohmann and Qiu 2020), we were able to create the following list of AI platforms beyond Mechanical Turk: Appen, Lionbridge, Clickworker, MightyAI, Clixsense, Pactera, iSoftStone and Streetbees.

Starting from this point, we investigated these platforms on LinkedIn, a social networking platform focused on business and employment. This service was chosen because of its public data about the relation between workers and platforms, making possible a segmentation by country. In order to construct a professional self-presentation, many Brazilians list themselves on LinkedIn as 'employees' of these companies. This facilitates finding worker profiles linked with these global AI platforms. Our investigation found a significant number of these workers on the LinkedIn profiles of Appen and Lionbridge. On Appen's LinkedIn profile, Brazilians were the second largest nationality group (776 workers, at the time of writing), just behind Americans and followed by Filipinos, Indonesians and Indians. On Lionbridge's LinkedIn profile, 137 Brazilians were listed, representing the fourteenth largest nationality group. From these two lists of hundreds of Brazilians, we selected 63 workers that we were able to contact through a message on LinkedIn, which limits contacts to members that have connections in common.

This initial observation that Appen and Lionbridge had the highest numbers for Brazilian workers was corroborated by a search for online groups that we conducted on Facebook. We found Appen and Lionbridge workers' groups with a significant number of members: the two biggest groups had respectively more than 4,000 and 1,000 workers. In these groups, we found an intense cycle of conversations with dozens of daily posts. Most of the debates had as their subject some specificities of the common experiences of workers at these companies.

Regarding the objective of analysing work of Brazilians on global AI platforms from the workers' point of view, we conducted participant observation during the research period on the two biggest groups on this subject on

Facebook (Hewson 2014). During this period, we interacted with the groups' members, aiming to map the themes and work practices that they discuss. We also had contact with WhatsApp groups advertised on the Facebook groups that we analysed.

Then, we conducted semi-structured interviews with 16 workers through messaging applications (Brinkmann 2014). Moreover, we contacted workers listed as 'employees' in the LinkedIn profiles of Appen and Lionbridge and the members of the online groups that we interacted with that manifested interest in giving interviews. Finally, we surveyed an additional 15 workers through a questionnaire with 15 questions about working conditions. Regarding these research efforts, the sample was composed of notes and excerpts of participant observation, 16 semi-structured interviews and another survey with 15 responses.

Acknowledging the diversity of the corpus, composed of notes about participant observation, survey answers and online interviews, we conducted an exploratory analysis aiming to map recurrent issues of this environment. In this initial overview, it was possible to identify a list of notable subjects that emerged more frequently. We began by describing general aspects of these workers' points of view, and subsequently we divided the findings into five categories regarding their relation to workers' perception: hiring processes; time tracking and difficulties proving hours worked; lack of infrastructural reliability; work strategies; and, finally, their definition of work and understanding of AI. All the categories and their types are intertwined and some of them overlap. The categorisation proposed in this chapter is intended as an exploratory effort that can help in understanding the specificities of these global value chains.

Analysis

It is immediately possible to note a significant range of different jobs that are performed by these workers. Organised into different '*projects*', these '*tasks*', as these specific work activities are called, can be very different types of data production: rating advertisements, correcting intelligent assistants' responses, correcting map information, producing personal data, analysing Facebook pages' relation with real businesses, categorising images, responding to surveys, transcribing, translating, subtitling and recording audio or video, etc.

During the interviews we analyse how these workers understand advantages and disadvantages of this type of work. The main advantages observed are related to flexibility, which was the topic most verbalised. Interviewees usually presented these activities as a job that they can do in different places at different times: 'I can do it while I'm watching TV, while I'm watching some TV series. I prefer it because it is time that I can turn off my brain and still make money', said Daiana, a 25-year-old odontology undergraduate student living with her parents. Laura, 41 years old, argued that this flexibility helps her 'work without

leaving home so I can take care of my 6-year-old son and do the housework'. Another frequently mentioned advantage is the payment in dollars, given that the exchange rate (at the time of writing) shows an aggressively favourable trend, boosting their income.

The most frequently mentioned disadvantage is the lack of job security, an aspect that shapes workers' overall understanding of their activities. As we will see in next sections, this lack of stability encompasses multiple factors such as the possibility of sudden termination or non-payment of wages. Geraldo, a 50-year-old IT worker, said: 'There are some tasks that I can't understand and if my answers are classified as wrong, I will lose 50% of my wages or lose my account. So, it's nice money, in dollars, but I don't have security. The rules change a lot and we are not always informed.' This sense of continuing instability, combined with the low pay, are factors that are linked with the evidence that the majority of the workers that we interacted with consider this just a side job. Although many of them are unemployed, the compensation that they receive from these platforms generally is not enough to cover the workers' financial needs.

One important issue in the communication between Brazilian workers in Facebook and WhatsApp groups is the selection process that workers must pass before being chosen for projects on these platforms. Generally, the selection processes consist of submitting a résumé in English and passing tests about the projects' guidelines, also in English. They are seen as tough obstacles to be overcome and are perceived as somewhat mysterious: 'It's impossible that I am the only one that is being rejected all the time', says a man in a Facebook group. Another member of the group responded: 'Dude, I don't know the criterion used or if the choice is just random, but I was accepted at the Mechanical Turk when I used a new email from Outlook.'

Time Tracking and Difficulties Proving Hours Worked: 'It's Annoying to be Accused All the Time'

In the online conversations and in the interviews that we conducted, the payment process is a subject that seems to be connected with many of the workers' practices regarding work for global AI platforms, in line with research on AMT in Brazil (Moreschi, Pereira and Cozman 2020). Some platforms, such as Appen, require workers to self-report hours worked. Although it would be quite reasonable to assume that these platforms have the technological capability to monitor work, they delegate at least part of this control to the workers: each one needs to present how many hours she or he has spent doing the tasks monthly. It's common to encounter workers' narratives about rejections and disagreement about the worked hours. Daiana said '[The platforms] are very disorganized. They dispute hours of work. They say "no, no, no, according to our system you didn't work those hours." And then it's very difficult for you to prove the opposite. Sometimes, I just shut up and accept it, because

otherwise, you won't get anything.' Regarding this, workers share experiences about how to verify the activities completed during the worked hours. In a Facebook group, a woman complained: 'Seems silly, but I do everything to meet the quota of five to seven working days a week. And for some reason, their crazy system just seems to be picking on me. Because it's no exaggeration when I say that I receive at least two [system warnings] per month, and they are NEVER true. It sucks to be accused all the time.'

As the first quote of this section illustrates, there is in these conversations and narratives a sense of inevitability, that any dispute concerning these alleged false accusations is pointless and can also harm workers' relations with platforms. On a Facebook group, a man says: 'a colleague went through a similar situation in [project name]. He sent several screenshots that proved his job completion and they never accepted them, unfortunately. Finally, he was removed from [project name] at a certain time.' Another male worker summarises this understanding: 'Whether you complain or not, it doesn't matter if you have your hours recorded, in the end you'll have to accept what they want.'

Work management has historically been based on the control of working time as a fundamental resource for work organisation by companies (Wajcman 2015). In line with other research on platform labour (Woodcock and Graham 2019; Van Doorn 2017; Abilio 2020), this reveals an algorithmic management of labour that produces meanings as impartial, inevitable and unattainable, like a data gaze (Beer 2019). However, this does not mean that workers do not communicate – and organise – among them about tactics around working on global AI platforms.

Lack of Infrastructural Reliability: 'A Lot of Bugs'

Frequent lack of infrastructural reliability shapes the work processes of Brazilians in the global AI platforms. It is necessary to recognise that these technical difficulties can vary from one platform to another and between projects on the same platform. During the research process, however, we encountered different narratives about problems such as platforms' 'bugs', dysfunctional apps, connection losses and difficulties regarding payment. The first layer of instability may be observed in the structures of the systems that workers use to accomplish their tasks. In the interviews, it was possible to understand that these difficulties shape workers' practices and affect their work capacity. Tarcila, a 27-year-old law student, relates: 'I worked on a Facebook project whose application had a lot of errors, a lot of bugs… [...] I had to analyse 30 ads, and sometimes I opened the application and I had only 15. [...] And sometimes, I sent the screenshot to Appen, and they didn't accept it because I didn't have the screenshot time, bla bla bla… A lot confusion.'

In Facebook and WhatsApp groups the narratives about platforms' 'bugs' produce a range of different perceptions about work. As Tarcila described, it

is common to see stories about loss of worked hours. A female worker in a Facebook group asks if she can be removed from a project for not working due to a bug that blocked access to the classification tool: 'I haven't been able to classify ads for days because of the bug. Hence today I received the following email: "Hello, You are receiving this message because our records show that during the week of [a week], you have not completed the requirements for the [name] project". These discussions are marked by expressions of feelings such as frustration and sadness.

Linked with the narratives about lost work hours due to platform bugs is the development of tactics to overcome these technical difficulties. These tactics represent knowledge of the technical logic of these labour processes, strategies based on the workers' experiences and their communication in online groups. In the same post mentioned in the last paragraph, another worker responded to the question, giving a suggestion about how to avoid system failures: 'Girl, you have to uninstall the Facebook app from your cell and install this version that I will put here. I do this every day (uninstall and install again) because my phone updates and there is no way to prevent the update.' As this quote shows, in this context many of the conversations about bugs are based on the workers' knowledge and may reference platforms' manuals and guidelines, but also cross into the grey areas in the everyday reality of workers which are not covered by these documents.

These narratives about the frequent inefficiency of the platforms' systems move this topic away from the *high-tech* image that is generally associated with the AI debate. This can be even more evident if we consider the problems of structure that are an inherent part of many Brazilian platform workers' everyday reality, in line with the research of Moreschi, Pereira and Cozman (2020). Problems such as loss of internet connection and glitches in mobile devices are frequent and shape the workers' practices and communications. These situations are relatively common in the groups which we interacted with.

Lastly, another lack of structural reliability for this planetary labour force (Graham and Anwar 2019) is represented by the payment systems. As processes may differ significantly from one platform to another, payment constrains the workers' routines and their relations with global AI platforms. In the communication analysed in our research, these processes are depicted as complex and costly, as a dynamic that involves a variety of platforms and financial methods. Therefore, different strategies are elaborated and shared with the objective of simplifying the receipt of payment and avoiding financial losses. Daiana explains her methods for maximising gains: 'At Appen, you get paid through another platform called Payoneer that charges three dollars per withdrawal. If I don't have any bills to pay, I gather a significant amount of money and minimize withdrawals. On the Lion[bridge], I can economize using the Husky platform [...]. The traditional Brazilian banks charge high taxes to receive foreign money. This platform charges only 3.5 per cent of the amount that you will receive. So, for me this is good because banks can charge up to 25 dollars,

a significant amount considering the value of my wages.' In online groups of Brazilian workers, the discussions about these strategies are frequent. In a post where a worker asks for help avoiding the high fees of a Brazilian bank, a male worker said: 'Guys, for God's sake, do not transfer directly to the bank, no! They will rob you blind. I have been robbed by all of them [banks]. Best option is the Husky [platform].'

Workers' Strategies: 'I Don't Speak German, but, Like, I Roll With It'

As was presented in the previous sections, the production and sharing of labour strategies is a practice that shapes the dynamics of these online groups. Many of the strategies that are discussed in these groups concern increasing or maintaining workers' earnings. Given the economic crisis, work on these platforms may represent an important factor in the economic survival of these workers. To exemplify this, one of the WhatsApp groups followed during the research period, with more than 150 members, has as its title the sentence 'Online Income in the Crisis'.

In our conversations with workers' different strategic approaches were mentioned as important ways to increase earnings, such as applying to different platforms for different projects. Renata, a 46-year-old translator, explains her method: 'My strategy to increase the remuneration is trying to combine the fulfilment of several small and simple jobs with big jobs of bigger values.'

On this subject, it was possible to observe a tension concerning workers who weren't qualified to do the jobs they had applied for. Tarcila explains that she applies for many projects, and then she tries to deal with the specific knowledge necessary to accomplish the tasks: 'There is a project that is for those who speak German. I don't speak German, but, like, I roll with it... I can try to do this project at home.' In contrast, Marta, a 27-year-old PhD student, complains about those who don't speak English but apply for projects: 'You have to know at least basic English, and most of the people don't. They only see an opportunity for easy money and their work isn't of good quality.' Daiana explains: 'People lie a lot on their résumés.' Marta highlights online translation as a tool for workers that do what she calls a low-quality job: 'People think that the online translator is good enough, so they deliver unsatisfactory work.' In the online groups that we followed, this tension is still more evident. It was possible to find a significant number of posts where language knowledge emerges as a topic in dispute. In a post where a worker asks whether he can do tasks in English just using Google Translate, another worker responds: 'You can use it, but be careful because if you want to continue on the project and be renewed, it is better not to use it or always try to correct it. If not, in six months they will not renew your contract.' In another post with the same theme, another worker contests this version: 'I always used big bro Google, and it's cool, contract renewed. This is an urban legend.' In other discussions, workers complain about what they

perceive as a sense of superiority and hypocrisy from those that critique people who don't know English. One worker protests: 'I thought it was a support group about questions and not a courtroom… Asking for help doesn't mean that I don't know English or that I'm stupid. You don't know enough about people's lives to speculate like this. There are people who don't lose opportunities to make others feel like garbage, right?' Similarly, in another post a worker says: 'Let's be sincere, a large part of the people who are here don't know how to speak English. So, don't come and say that if the person doesn't know this or that she/he won't be able to pass this test, because I guarantee that everyone has used or still uses some form of machine translation.'

On the one hand, the statements above show the tensions identified by Soriano and Cabanes (2019) between 'world class work' and 'proletarianised labour' involving digital labour imaginaries in the Global South. The inequalities and struggles of human labour behind AI have a strong geopolitical dimension. To understand AI, it is necessary to think about spaces of labour. On the other hand, this reveals the material conditions of data production. Why do global IA platforms need Venezuelans to train data for self-driving cars (Schmidt 2019)? Why are Filipinos required for content moderation labour (Roberts 2019)? AI, as a techno political and economic project, is based on these inequalities in the most diverse layers of mediation.

The circulation of workers' struggles, as stated by Dyer-Witheford (2015), does not happen in the same way in all parts of the world. Platformized forms of colonisation are not just in terms of data, but how they are produced and circulated by human beings (Couldry and Mejias 2019). This means understanding AI colonialism, or how resources are expropriated from people in countries of the Global South to endorse platforms based in the Global North and their mechanisms of value extraction.

The tension concerning the usage of online translators in the AI platform workers' practices brings out the subject of data production more evidently in our analysis. The greatest part of the public discourse about AI emphasises its computational potential, which is generally portrayed as a force that can reshape society. While the role of data is positioned as a key element in the AI infrastructure, the debate about its production is still a secondary topic, and these platforms advertise their training datasets as 'reliable sources' produced by 'skilled annotators'.

However, the analysis of workers' narratives and communications presents a more complex scenario, marked by many levels of *translations/mediations*, in the philosophical sense that the Actor-Network Theory gives to these terms (Latour 2005). This point is reinforced by authors such as Beer (2019) and Couldry and Mejias (2019). Computationally, data always represents abstraction of real phenomena (Wirth 1985). Critically observed, data used in the AI industry cannot be considered natural matter that is captured 'from the world in neutral and objective ways' (Kitchin 2014, 6). This training data is produced by complex

processes that involve many different groups of workers, both high and low technologies and various socio-economic conditions. In other words, based on our analysis we argue that data produced by AI global industry platforms is shaped by these work conditions, as a reality composed of many layers of mediation.

Definition of Work and Understanding of AI: 'I Say That I Work Improving Top Secret Artificial Intelligence'

One of our specific objectives in the exploratory analysis of workers' communications was to understand how they perceive their labour practices in the context of the global AI platforms industry. Although this didn't represent a central topic in workers' conversations in the online groups that we interacted with, it was possible to encounter some discussions about it. In one post, a worker asks other members of the group: 'Guys, just out of curiosity: When someone asks you what your work is, what do you answer? I always say that I work for [platform] which is an online company, but I never go deeper... and you?' Another worker responds: 'I say that I work improving top secret artificial intelligence.'

The notions of data, algorithm and AI appeared only sporadically and in the context of other discussions, as the last quote exemplifies. We consider it possible to sustain that many workers in online groups do not see themselves as part of the AI industry, viewing their work in a more practical sense, for example, as categorising, evaluating, segmenting or correcting information, behaviour, content or ads. In our interviews, the situation was similar, but we were able to deepen the discussions. Asked whether she understands the relation between her work and AI technologies, Daiana says: 'For me, it was always very clear. I always knew I was doing it to train the companies' algorithms. They say that. They say that our work is essential to improve search engines, to train their algorithms.' In the survey responses, just one respondent spontaneously correlated his/her work with AI: 'I think I'm helping artificial intelligence systems to assimilate cultural aspects, determining funnels that help to show ads and contents to specific user profiles.' When they were questioned about how they think that their work helps to create or train AI systems, the responses focus on the idea of improving algorithms and helping users.

Conclusion

In this chapter, we described exploratory research conducted through online workers' groups on Facebook and WhatsApp with the intent to deepen and diversify the empirical analyses of the work of Brazilians on global AI platforms. This research involved a diverse corpus comprised of our notes from

participant observation and workers' survey answers, as well as online semi-structured interviews. Although the study covers a limited number of workers, the results are significant and point to some consistent trends. Based on this initial effort, we conclude that the labour dynamics of Brazilians engaged in work for global AI platforms are complex and evidence several specificities. This initial finding corroborates the hypothesis of a *taskification of labour*, as Casilli (2019) states, and we added the geopolitical dimension, in order to affirm that there is no digital labour universalism. Platform labour behind global AI companies reveals something deeper in relation to working conditions in countries like Brazil where gig is the norm and whose economy is based on informality.

As the analysis revealed, the workers' online communication represents an important practice that shapes the way they understand their work activities and the way they orient themselves in their interactions with these platforms. In other words, the knowledge that is produced and negotiated in these online environments shapes the workers' activities as tactics and strategies. The communication between workers represents a historical phenomenon associated with the labour practices. However, in the context of the platformization of labour (and consequently the isolation of the workers) this communication represents a key element of what Abilio (2020) termed 'management of survival', proving that workers aren't *unorganisable*. Platforms can be considered as means of communication and production (Williams 2005). Thus, communication helps both in the organisation and control of work and in the organisation and strategies of workers.

Finally, we consider that our research reinforces the idea that the datasets that fuel AI models need to be understood in the context of complex global chains of digital labour. The fact that computational data is an abstraction that embodies its conditions of production should prompt us to consider the various layers of mediation (some of them presented in our analysis) that these data production systems encompass, especially because these systems ultimately shape AI decision-making processes. Approaching the potential and agency of AI without considering the conditions of data labour, we sustain, represents replicate uncritical understandings that depict AI as objective, high-tech computation produced by the Global North. We assert that critical AI studies have to consider the Global South perspectives, acknowledging that data production for automation is not a homogeneous process, neither in relation to workforce composition nor to platform structure specificities. The labour dimension, we sustain, is a vital component in approaches that aim to be critical about AI. As our exploratory analysis shows, there is more negotiation, conflict and low-tech in the AI industry's Global South workforce than is presented in the global AI platforms' discourse. There is no digital labour universalism nor a homogenous workforce regarding heteromation of labour on AI platforms. Rather, there is an AI colonialism reinforcing North–South inequalities from a platform labour perspective.

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