

Standby Work and Time Factories: The Case of Logistics and Transport Companies in the Brabant Region (the Netherlands)

El trabajo de la espera y las fábricas de tiempo: el caso de las empresas de logística y transporte en el Brabante neerlandés

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Key words

Algorithms

- Delivery
- Time Factories
- Flexworker
- Logistical Rationality
- Standby Work
- Platform Work

Palabras clave

Algoritmos

- *Delivery*
- Fábricas de tiempo
- *Flexworker*
- Razón logística
- Trabajo de la espera
- Trabajo de plataforma

Abstract

This study draws on ethnographic research into the living and working conditions of Spanish migrant flexworkers in the Dutch logistics sector. The findings show that the increasing pressure for individuals to remain constantly productive, driven by the deregulation of employment and working hours, compels them to continually rationalise their reproductive time devoted to rest, consumption and care. Within this realm, new activities, technologies and groups of subaltern workers emerge, dedicated to producing or freeing up that time, shaped by a new logistical rationality.

Resumen

El estudio se basa en una investigación etnográfica sobre las condiciones de vida y trabajo de *flexworker* emigrante español en Países Bajos en el sector de la logística. Los resultados muestran cómo la creciente presión sobre los ciudadanos para emprender actividades productivas en cualquier momento, facilitada por la desregulación del empleo y la jornada de trabajo, fuerza a una continua racionalización de sus tiempos de reproducción (descanso, consumo y cuidados). En este ámbito, aparecen nuevas actividades, nuevos dispositivos técnicos y nuevos colectivos de trabajadores y trabajadoras subalternos, dedicados a producir o liberar ese tiempo y gobernados por una nueva razón logística.

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INTRODUCTION

This research examines an increasingly widespread phenomenon in contemporary capitalist societies: the reorganisation of work and time around a new logistical rationality (Bahsri and Zakaria, 2023). The rise of digital platforms, employment deregulation and the growing pressure to optimise the use of time have generated an economy where waiting, paradoxically, becomes work. The so-called “time factories”, especially visible in the logistics centres of Brabant (the Netherlands), provides a privileged vantage point from which to observe this phenomenon.

The study builds on a rich body of literature addressing the transformation of time under capitalism (Marx, 2019; Dörre, 2011), neoliberal rationalisation (Laval and Dardot, 2010) and the emergence of new forms of labour subordination mediated by algorithms and platforms (Altenried, 2016; Apostolidis, 2019). It examines the transition from the Just-in-Time to the Just-in-Case production model, associated with the logic of stock and available time. It shows how these “time factories” no longer primarily produce goods, but rather their availability and speed of access to them—shifting temporal costs onto subaltern workers.

THEORETICAL APPROACH: NEW LOGISTICAL RATIONALITY AND TIME FACTORIES

Since the 2007 crisis, it has become clear that the development model associated with the post-Fordist phase of the global capital accumulation process is losing momentum (Piketty, 2012). The globalisation of productive and reproductive processes from the 1990s onwards, which involved the geographical expansion of

offshored industrial capital to countries with large unwaged populations and low labour costs, has encountered and produced its own spatial and natural limits.

However, the dynamic nature of the capital-labour relationship also gives rise to various strategies among production stakeholders aimed at restoring profit rates and reactivating the process of expanded accumulation.

One strategy for restoring profit rates involves shortening and accelerating the cycles of capital realisation. A complementary approach seeks to rationalise the time Western wage earners devote to their own reproduction by reducing, condensing and “streamlining” reproductive time. This takes place through the online consumption of goods and services via digital platforms, the outsourcing of care, and new forms and modes of mobility. It also includes the use of various therapies and treatments designed to speed up physical and mental recovery (Moreno, 2016), as well as the pharmacological management of rest and occupational illnesses, among other measures (Bailin, 2019).

In addition to these tensions around time, there are other less conjunctural and more structural tensions. These generally concern mechanisms for freeing up time and realising the time freed from the system of reproduction of capital itself. This issue was addressed by Marx in the famous Notebook VII of his *Grundrisse*.

Marx first explained how entrepreneurs invest in fixed capital to foster and appropriate technological innovation and the knowledge generated by the “general intellect”, with the aim of enhancing labour productivity. This, in turn, reduces the unit value of both consumer and capital goods, thereby diminishing necessary labour—the portion of value produced by labour power required to meet essential needs—and increasing surplus labour. In

other words, it gives rise to relative surplus value.

Marx argued that productivity growth depends, on the one hand, on the time and labour power available for social knowledge to be applied to and incorporated into new investment in fixed capital—which, in turn, requires free labour power for the production of capital goods—. And on the other, on the fact that this availability of time and labour force is made possible precisely by the increased productivity in the processes that directly generate consumption goods. In other words, the increase in the productive power of labour frees up goods and workers, non-working time, which can be allocated to those classes that are not immediately productive (knowledge workers). Nevertheless, in order for this freed-up non-working time to become not merely a social productive power at the service of the working class but also a contributor to the realisation of capital by generating surplus labour, it must be “subsumed” back into the production process via the wage relationship. This occurs because knowledge workers see the product of their labour formally subsumed under processes of devaluation which stem from the very growth in productive force of labour to which they contribute, and forces them to employ their time productively in order to secure their own necessities of life¹.

At present, it is possible to identify, for example, some subsumption mechanisms that enable this transformation of *dispos-*

able time (in Marxist jargon) into productive (surplus-value producing) labour time.

Firstly, there is a wide array of discursive mechanisms and constraining administrative factors that promote the individual rationalisation of non-working time. These include the promotion and institutional recognition of entrepreneurship, together with a proactive attitude towards creating value at any time and in any context (Bloom, 2013); the portrayal of online micro-investment activities such as crowdfunding, crowdlending, stock trading or bitcoin speculation as forms of leisure; and the pressure to use free time productively through educational, cultural or sporting pursuits, which keeps workers in a constant struggle to maintain or improve their employability (Cremin, 2010).

In the sphere of formal employment, the boundaries between work and personal life have also become increasingly blurred due to the shift towards more flexible hours and various forms of distance working. The commodification of wage relations has further led to the implementation of new remuneration schemes, including what has been called management by objectives, in which employees are granted the “autonomy” to increase their earnings individually by extending or intensifying their work at any time and in any context. Even the effective reduction of the working day itself (reduced working hours, continuous working day, work-life balance measures, remote working arrangements, etc.) could mean that workers need to use the freed-up time productively if their real wages fall by the same amount.

However, alongside these mechanisms and practices for freeing disposable time and converting it into surplus labour, there are also novel mechanisms for the production of time, emerging from the systematisation of what have been termed

¹ “What capital adds is that it increases the surplus labour time of the mass by all the means of art and science, because its wealth consists directly in the appropriation of surplus labour time; *since value is directly its purpose*, not use value. It is thus, despite itself, instrumental *in creating the means of social disposable time*, in order to reduce labour time for the whole society to a diminishing minimum, and thus to free everyone’s time for their own development. But its tendency is always, on the one side, to create *disposable time*, on the other, to convert it into surplus labour” (Marx, 1998: 231-232).

the new logistical rationality and time factories. These are basically industrial activities in any sector, in which the production rationale has been displaced, to a greater or lesser extent, by what is called a new logistical rationality aimed at the production of time. For example, some expert forums have suggested that many supply systems for parts and components, such as those in the automotive industry, should move from the traditional “Just-in-Time” (JIT) “Just-in-Sequence” (JIS) philosophy, to what they call “Just in Case”. Just in Time followed a cost-saving production rationale (Bonacich and Wilson, 2011): making what is already sold; fragmenting the flow of manufacturing and delivery; hierarchising the collective worker between larger firms with more stable jobs and smaller workshops with more precarious work; and accelerating the capital investment-realisation cycle by seeking to achieve what Harvey called “time-space compression”. However, the so-called “Amazonification” of supply for production is more concerned with the use of modularised product design, which enables the creation of a stock of pre-assembled modular sub-units and components. These act as buffers that structure the relatively segmented supply and distribution chains into intermediate stations. In this way, along with the goods inventoried at these stations, there is also, logically, a workforce on standby, waiting to be called in order to ship, transport, receive and assemble, pack or package those goods.

These are production systems which manufacture and sell different kinds of use values, but which are also carriers of disposable time, so to speak. In other words, they sell goods or services that meet a need while also saving a substantial part of the time required to satisfy that demand. For instance, they reduce the standby time between order and delivery, shorten the time

spent searching for and comparing quality and prices, eliminate trips to points of sale, or take care of domestic tasks (such as management, cleaning or care, among others). This feature causes the production and distribution of these goods to be organised in new ways, transforming the organisation of labour and the production process through to delivery (Cowen, 2014).

Vehicle manufacturing is a sector that has always set the trend in new production models. This sector no longer involves a subcontracting chain integrated within a single territory and culminating in a “head company” that assembles a single customised model for each client. Modularisation has given rise to a regional specialisation of manufacturing plants in the production of stocks of macro-assemblies that can be incorporated into different types and ranges of vehicles. Thus, assembly plants now manufacture different models and ranges on the same line from different modules, in order to minimise the time between the placing of an order of a relatively customised but already manufactured product and its delivery (López Calle, Rísquez and Ruiz-Gálvez, 2020). This has also entailed some geographical reorganisation of either the plants themselves, of the production carried out within them, or of the workers who had the most precarious working conditions and were previously located in peripheral regions and are now mobilised to the centre, closer to the customer (Gregson, 2018).

Why the Randstad region (the Netherlands)?

The Netherlands is a paradigmatic example of this type of industrial recentralisation in Europe. It is also the epitome of the new logistics rationale that has emerged, particularly in the case of generalist e-commerce or high-demand products, such as food and textiles. In many cases, there are

not merely logistical hubs for storage, packaging and dispatch, but also facilities where the final stages of production the production process are undertaken. These centres often prioritise production speed over quality, leading to frequent incidents, defects and waste of goods and raw materials. Processes are also simplified and standardised to facilitate job replaceability and the real-time, on-demand recruitment of unskilled workers.

When the companies involved are relatively small and unable to maintain a minimum level of stable production, intermediary storage and sales firms emerge to carry out this work for them. These firms receive more or less “stocked” consignments from small producers, store their products, put them up for sale, and package and dispatch them *just in case* to the final customer. In this way, the dependent relationship between logistics companies and product sellers is gradually reversed. It is no longer the latter who subcontract an online sales and distribution service; rather, these time factories become their end customer and come to dominate the value chain, whereby logistical rationality prevails over production rationality. An example of this is Ceva Logistics, a Chinese-owned multinational that used to engage in international container transport, logistics warehousing, online sales and home delivery for different brands, but now carries out e-commerce operations for itself on its own digital platforms.

Other types of warehouses have also been found there, dedicated to more specific activities such as textiles or food, which operate according to this new rationality. These include, for instance, final labelling, packaging or wrapping of clothes; bottling of juices and dairy products; final baking and tray-packaging of pastries; and the arrangement of bouquets and floral centrepieces, among others. They are all examples of how product quality and la-

bour productivity have been seen to be displaced by the intermittent activation-deactivation of processes. This gives rise to numerous errors, incidents, accidents and product returns, which in turn causes additional suffering to workers operating in contexts marked by uncertainty, unethical practices and a lack of recognition for work well done. A paradigmatic case that has been extensively studied is that of the Spanish multinational clothing manufacturer Inditex, which has refocused its manufacturing and sales strategy in recent years. The company has shifted from a production and distribution model centred on in-store sales to one based on e-commerce and home delivery (which now accounts for 25 % of the group’s turnover). The key milestone in this shift has been the establishment of a large-scale logistics centre in Lelystad, located between the port of Haven-Lelystad and Schiphol International Airport in the Netherlands. The model applied by Zara, the group’s most emblematic brand, is characterised by a highly integrated manufacturing and sales chain with few intermediary links, and by a networked organisation of final sewing workshops and regional logistics warehouses supplying shops in each area. Its ability to restock unique garments based on sales in individual shops relies on its own logistics system and on a relatively stable, undiversified network of suppliers and manufacturers, following the so-called proximity supply model. This allows, for example, high traceability of the value chain and enables trade unions to enter into international framework agreements to monitor working conditions along the entire production chain². Inditex’s new profitability strategy, as observed in the visits and interviews with workers, has involved a radical

² See, for example, the Inditex Global Framework Agreement. Available at: https://www.industrial-union.org/sites/default/files/uploads/documents/2019/SWITZERLAND/INDITEX/espanol_-_industrial_inditex_acuerdo_marco_global.pdf

transformation of the model: in the 100 000 m² building in Lelystad, clothes manufactured by new suppliers based in China are stored in stock³, to the detriment of the so-called proximity clusters. This clothing goes on sale online when it arrives in Europe. It is sent directly from there to the last-mile delivery logistics warehouses for home delivery within 24 hours and without passing through the shop. The management of these warehouses is already subcontracted (to XPO, a logistics operator specialised in textiles), which uses agency workers, *flex-workers*, hired by the hour, to fold and pack the garments.

In short, the Randstad region, located in the area surrounding the port of Rotterdam (Europe's main port of entry for goods manufactured in Asia, Africa and America) has specialised in this type of logistics hubs for the sale of general consumer goods via digital platforms. The system, in any of these versions, allows these products to be shipped within 24 hours to any location in Central Europe within a radius of 500 kilometres.

METHODOLOGICAL AND IMPLEMENTATION APPROACH

Researching new forms of labour in time factories (often referred to as “standby work”) requires the use of specific research techniques. Ethnographic research and immersion in the field are the most appropriate tools from the sociology of work toolbox. They have been employed both inside and (above all) outside workplaces: in residential spaces, on transport routes and at transit sites. The aim here was to adjust the

research lens to focus specifically on those spaces and points in time in which nothing seems to happen, where neither productive nor reproductive work is being carried out. This standby time tends to be either invisible or rather presented as interruptions, failures and wasted time in the field of classic studies on transport and logistics focused on accounting for just-in-time supply systems (Belzer, 2000; Useche *et al.*, 2021), faced with the expectation of finding tense flows and constant mobility of goods and people.

The research began in December 2016 and is still ongoing, mainly through the programming of week-long field immersions stays, with a variable team of four to eight researchers, depending on the needs and availability at any given time. These stays were as follows: January 20-27, 2017, Waalwijk-Tilburg; September 2017, Rotterdam-Amsterdam; April 29 -May 30, 2018, The Hague and Waalwijk; June 3-7, 2018, Tilburg and Turnhout; September 9-13, 2019, Waalwijk and Droomgard; December 20 to 21, 2019, February 2 to 7, 2020, Amsterdam and Tilburg; June 7 to 14, 2022, Vlissingen and Ghent; April 15 to 22, 2023, Vlissingen and Lelystad; October 18 to 26, 2023 in Hooge Mierde, Lommel, Putte-Kapellen; February 3 to 12, 2024, Waalwijk and Tilburg. In total, ninety-four in-depth interviews were conducted and around one hundred and fifty field notes were collected, as well as a large amount of cartographic and photographic material⁴.

⁴ Part of the research has been funded by the National Research Plan project *New models of life and work in the Information Society. The case of large metropolitan peripheries, TRAVIDA*. CSO2008-04002. Another part of the project was conducted using funding from the *Living and Working Conditions of the New Labour Migrant Population in the Netherlands, 2020-2022*, Order ESS/1613/2012 of the former Ministry of Labour and Immigration. In the final stage (2023-2024), the financial resources for the project were provided by the Consulate of the Spanish Ministry of Labour and Social Affairs in Brussels under a small-value contract (Article 80). This funding

³ According to the group's annual report, almost half of the group's suppliers are now located in China, compared with only 29 % in 2015. Available at: https://static.inditex.com/annual_report_2023/es/Memoria_Anual_Grupo_Inditex_2023.pdf

The *modus operandi* for research involved renting one or two cars to travel around the area with flexibility and ease, as well as booking bungalows or holiday homes for two- or three-day stays. These accommodation arrangements made it possible to hold group meetings to prepare the fieldwork each day and discuss the results of the day's activities.

The interviews were open-ended and lasted between one and two hours. They were mainly conducted with workers (either individually or in small groups), who were mostly contacted directly after leaving their workplaces, in their places of residence (campsites, hotels, dormitories and private homes) or in bars and shopping centres. Contacts were also made through different social media platforms, snowballing methods or directly through recruiters in Spain or Dutch temporary employment agencies. Additionally, twenty interviews were carried out with employers (both from warehouses and, above all, from recruitment agencies and temporary employment agencies), trade union officials and Dutch administration officials (Ministry of Labour, Waalwijk and Tilburg town councils and the Spanish consulate office in The Hague).

THE CASE STUDY

The organisation of work processes in logistics warehouses. The case of Bol.com in Waalwijk

Let us start by briefly describing the work processes in the e-commerce logistics warehouses studied. First of all, the logistics centres for warehousing and distri-

bution in the Brabant region operate as “buffers” for the continuous global flow of goods between periphery and centre. They are located in the industrial estates of medium-sized cities within the area of influence of the Port of Rotterdam, connected by the network of inland waterways that serve the port. Europe's main road and rail transport arteries run through the region, and some airports (such as Schiphol) are specifically dedicated to international freight traffic.

These warehouses are used to receive the continuous, relatively steady flow of goods arriving as stocks, which are purchased by the companies that own the distribution and sales platforms across Europe. This is partly done on the basis of annual sales forecasts, which are calculated algorithmically based on big data collected from data centres on a continuous and incremental basis. The research involved the case study of Bol.com, an e-commerce platform similar to Amazon which is widely used in Central European countries.

Bol.com's warehouses (currently three in the Waalwijk industrial estate) are managed by warehouse logistics companies such as Ceva or Ingram Micro. The logistical process in these warehouses begins with the unloading of the pallets from the dozens of containers that arrive throughout the day. Products arrive in stock; in other words, Bol.com makes regular purchases from producers around the world based on their sales forecasts, but the products themselves have not yet been released for sale. They are only available for sale when the items are placed on the warehouse shelves: receiving workers assign a barcode to them, and the system places the items on the website with its price and delivery conditions. Work at this receiving stage is relatively stable, as the group of operators involved work in shifts and have fixed schedules.

supported a partial study on the accommodation of Spanish logistics workers in the Netherlands who reside in campsites located in German and Belgian territory. A full report of the results of this research up to 2021 can be found in Arosa Sun (2021).

This is not the case in the picking and dispatch stage, where the workload varies in real time according to demand, and pickers have highly flexible daily and weekly schedules. The primacy of speed and the high turnover of workers in these stages seem to compensate for the clearly improvable levels of stability and reliability of the system; this is evidenced by the high number of incidents and accidents within the warehouse, as well as by the equally high number of customer returns, caused both by damage and by delivery errors. In fact, the warehouses have a Returns Management department, which plays a significant role within the system and is dedicated to handling the thousands of items returned by customers every day. These items are, for the most part, checked and returned to the put-away shelves for re-sale.

The standardisation of the work performed in these warehouses (pickers carry out identical work across all logistics facilities in the region) facilitates the real-time availability of these workers, who are called by the hour according to variations in product demand throughout the day. This is inherent to the aforementioned inefficiency of the process. The production and sale of time take priority over the quality of the product, which, conversely, has a relatively low manufacturing cost at source.

Standby work outside production facilities

When the process was examined more closely, it became apparent that every stage of the logistics process involved a very specific kind of work: standby work. *Flexworkers* on standby in company-owned dormitories or bungalows, waiting to be called at any moment to carry out occasional picker tasks in logistics warehouses; long-distance lorry drivers stationed in nearby car parks waiting for loads; riders engaged in last-mile

delivery, keeping an eye on their app at any busy intersection in large cities, and so on:

When your tacho is off, you are on a break... A driver's working day is at the most 15 hours long, but when it ends and you have to turn the tacho off, you don't go home — you stay in the lorry. [Interviewers: And what do you do? The whole time in the cab?] - Yes, you look at your phone... watch a series... I'd gone two weeks without speaking to anyone like you, ha ha [-I:] Two weeks here [in the Netherlands]? -Two weeks, I came just two Mondays ago... [-I: and how many kilometres have you done? Because it's a long time...] -No, not really... just a few... yesterday, four hours... today I don't know, I'll have to make the most of it, even if I leave late... but you've been standing still for a long time, sometimes you have a good month and it goes well, but sometimes... It is really badly planned... You shouldn't have to miss loading dates: you get here, unload and then load... but that's doesn't happen very often... now I've been on standby since yesterday morning, waiting to load at eight o'clock in the evening... [-And what's your salary like?] -I have a basic wage [1200 euros], but then I get paid per kilometre done [0.09 euros/km]. [- So if you don't drive you don't get paid for part of it?] Yes, that's right, [- how much did you earn last month, for example?] - About 2000, something like that.

This is Joan, a lorry driver from Lleida (53 years old, married, with two children) who was in the car park of a Spanish juice company based in Flesinga (the Netherlands). His truck was parked next to dozens of other lorries, many of them from large Spanish companies (Fuentes, Primafrio, Caliche, etc.) and large Polish companies.

These long-distance lorry drivers can be either self-employed or salaried (with posted worker status). They usually spend three-week blocks of time transporting freight throughout Central Europe until they return home for a weekend, which, by law, must be spent at their usual places of residence. During these work

periods they sleep and eat in the cab of their lorry. This activity has increased to such an extent that Spanish transport companies such as Fuentes have installed their own lorry parks all over the country at the doors of the main companies they work with, which provide some services for use by lorry drivers during their standby time, such as showers, washing machines and recreation rooms.

As in Joan's case, the study identified numerous instances of logistics workers, across different stages of the process, who are experiencing a new form of workplace hardship: the deterioration of these workers' conditions is not so much due to an increase in workload (as is common in other occupations), but rather due to a lack of work. Being on standby is not like being on call. On-call duty is paid and of a known duration. It is also a socially recognised and meaningful time period, even subject to regulations governing the conditions under which it is to be carried out.

As with non-working time among the unemployed, time spent on standby—albeit unpaid—cannot be used for other activities such as job-seeking, training, sport or cultural pursuits. Being on standby is marked by empty, neutralised time, which may explain why it tends to occur in non-places that are neither fully public nor entirely private, such as employer-provided dormitories, lorry parks or street corners in city centres.

Being on standby can therefore be defined by four factors. Firstly, by a limited ability to use time autonomously. Secondly, by a spatial-territorial arrangement that makes it possible to mobilise the workforce quickly. Thirdly, by the use of technical devices that efficiently coordinate staff management and order demand, as is done by digital platforms and the algorithmic organisation of orders and personnel. Lastly, but no less importantly,

by the the lack of a fully recognized employment relationship in salaried arrangements.

The availability of a highly vulnerable workforce

The last factor mentioned above—the absence of a fixed daily wage (or its marked disproportion compared to the earnings one can obtain when it does exist)—is crucial not so much for companies' cost-saving purposes, although that plays a role, but because it functions as a key mechanism for organising labour. The aim of management is not to prevent delivery workers from being paid when they do not work, but to ensure that they are paid only when they do work. This does not, however, prevent workers from being required to maintain a high level of work intensity that exhausts their daily energy within relatively short periods once they are called in. In this type of activity, the intensity of workers' availability to dispatch an order at any time and to any place is directly proportional to the erosion of their power resources; in other words, the scarcity of channels for individual and collective negotiation, the reduction of social protection mechanisms linked to availability policies, the aforementioned absence of formal employment status and the weak capacity for collective subjectivation.

As well as organisational and production-related changes, we are witnessing the emergence of a new generation of contractual arrangements specifically intended to formalise this practice: the temporary agency work contract; the new types of zero-hour contracts that have been gradually regularised in recent years in the United Kingdom and the Netherlands (O'Sullivan *et al.*, 2019); the status of intermittent worker; the concept of the dependent self-employed worker; and the

so-called “partners” in delivery companies, among others. All of these are legal mechanisms that progressively open the door for individuals to “freely” choose to surrender certain citizenship rights, such as the right to their own “free” time, in exchange for some form of compensation. Remuneration, therefore, is no longer consistent with the work done, but with the relinquishment of the right to decide what kind of work to do and when to do it. The consideration provided to them by the company is thus simply having some degree of priority in access to hours or orders over an external worker. It is somewhat akin to buying the right to access the labour market. What workers give in return is relinquishing their right to work for other companies during that time and having fixed working hours at the end of which they can enjoy some free time.

A further turn of the screw in this relinquishment of private life in exchange for a job (one that demands the creation of the *flexworker*) is the normalisation of work-related geographical mobility: recruitment at source, the posted worker contract⁵, and, more generally, the free movement between countries within large areas, such as the European Union. By enabling the transfer of workforce from regions with a surplus to those with a shortage, these mechanisms create the need for many unemployed workers to move. Of all these constructs, the most revealing is perhaps that of the posted

worker. Beyond the tax and wage advantages it offers to the employing company, the term itself acknowledges and normalises the idea that someone can live as a permanently posted worker, without a workplace or location, and therefore without the possibility of establishing roots anywhere.

This is, in fact, the type of labour mobility that is promoted in the European common market, based on the principle of freedom of movement for work purposes, but which “allows” individuals to retain their citizenship of origin (i.e. makes it difficult to obtain citizenship of the destination country) (Castracani *et al.*, 2020). International job mobility systems such as the Eures Network⁶ were set up to this end.

For many people, this type of “employment pathway” entails being separated from their families and personal environments; leaving their home communities behind; giving up their social and cultural activities; and losing access to the knowledge, codes and procedures they have acquired for obtaining goods and navigating services and administrative procedures, among other things. Rebuilding them in the destination areas proves extremely difficult, as these forms of labour migration (conceived for commuting or transient workers) are not accompanied by citizenship rights in the

⁵ This legal construct was created to facilitate “competing claims of competence where personnel are sent abroad by their employer for a project [posting] between the rules governing employment relations in the service provider’s home country and the country in which the work is actually performed [but in which the personnel are not habitually based]”. Directive 96/71/EC partly reformed the 1980 rule on posted workers, which required the application of the labour standards in force in the country of destination, so that their being transferred would not lead to a displacement of native workers and, in the long run, lower working standards in the countries of destination.

⁶ The EURES network was created in 1993 by a decision of the European Commission (replaced by the Commission Decision of 23 December 2002) to allow the free movement of workers within the European Economic Area. EURES links the European Commission to the public employment services of the countries of the European Economic Area (the EU Member States plus Iceland, Norway and Liechtenstein), Switzerland and other bodies. The objective of the EURES network is to provide services to workers, employers and any citizen wishing to benefit from the principle of free movement of persons, by providing information and advice on job vacancies and applications, on the situation and developments on the labour market, and on living and working conditions in each country.

host country (Mezzadra and Neilson, 2024). These basic rights include being part of the electoral census, which grants them access to significant public and social services, as well as the opportunity to participate politically and civically in the communities where they live, for example, through the payment of taxes.

On the other hand, the non-relational nature of these kinds of employment ties, which begin and end according to the hours of work performed or orders delivered, would jeopardise the time-based production system if workers were able to negotiate their terms and conditions on a call-by-call basis. This is where another important technical device in the organisation of time factories comes into play: the use of algorithms for order allocation.

The human resources management algorithm in the production of availability

The standby status of the *delivery subject* ultimately requires a rare and specific attribute: availability, which is produced by new work organisation devices, such as human resource management algorithms (Altenried, 2016; Kleinberg *et al.*, 2020). It is a type of attribute which (unlike any other) is and is not a skill at the same time. It is not part of workers' training capital, insofar as it cannot, like any other type of knowledge, be a resource of power for the worker, but is rather a state of readiness to be called. These work arrangements produce, on the one hand, highly unskilled, manual and simple types of tasks that are subject to constant monitoring; and on the other, they generate states of uncertainty prior to the call through a calculated arbitrariness in the allocation of working hours and orders. That is, these systems of distribution do not follow criteria that can be predictable

for workers, such as productivity ratios, performance evaluations, skills, warnings or proximity to the order or workplace. This deliberate arbitrariness in the allocation of work fosters a strong readiness for sporadic employment, as it cultivates a *pathos* of total lack of strategic calculation among employees.

ISABEL is one of a kind. ISABEL plays with an algorithm that none of the people who have explained it to me understand. And this has been explained to me by people who have been in the company for years and who more or less know. So, T. is the one who explained it to me and she is the one who taught us more or less what it is... But the thing is that the algorithm shuffles... that is, among the possibilities it shuffles, it plays with each person. It shuffles each person and shuffles... their agency, the days their agency has to distribute the workers. It also shuffles the department you are in and the days your department needs or the hours [...] of your department. It also shuffles Dutch law, because you did overwork, but you can't overwork, and if you have been working constantly, let's say from Monday to Friday, right? and so on, [to make sure that] it doesn't give different dates. I don't know exactly how it goes, they explained something about how the law works as well. Something like if you work more or less on a schedule, they can't just say, "no, you're not going to work for two days like this and then like that". No. They have to adjust that a bit. So it shuffles all that and it puts it in; of course this comes to the agency later, see, this is mine [he shows us his tablet], for one reason or another, this person's date was changed, or this one has to go to the doctor, but then, depending on what the agency needs, it lets you do it on those days. So they change people's *plannings* [*sic*], and the agency tells me it was Ingram, but it was ISABEL. At the end of the day, ISABEL makes the calculation and sends it, and if you need 100 workers for that day, you need 100 workers, you don't need fewer than that (Marcos, flex coach at Ingram Micro, Waalwijk, May 2019).

Although the system continues to record all these productivity indicators un-

der the pretence that they matter, management algorithms now enable an optimal integration of effectiveness and efficiency criteria, which has historically posed major challenges for production planners: on the one hand, the individual rewarding of production factors such as the number of items or orders handled, punctuality, accumulated skills, and supervisor or customer evaluations; and on the other hand, dependence on the subjectivity of the workforce, which allows employees' differential productivity to be recognised.

In short, the algorithm modulates two antagonistic principles of distributive rationality in capitalism: merit-based reward, on the one hand, and arbitrary reward, on the other. The former prioritises the production of value, while the latter gives priority to reducing the cost of the labour force that produces it, thanks to two of its specific technical features, which are discussed below.

The first feature is that it makes it possible to meet one of the essential conditions for the production of arbitrariness: that it be exercised unconsciously (Fritts and Cabrera, 2021). Not only does arbitrariness go against the formal ethics of the work society (rewarding the individual effort of employers and workers), but it does not even support the logic of the traditional bureaucratic rationality in which traditional personnel management takes place (operating protocols, rules of conduct, evaluation systems, etc.). In fact, until now, the excessive bargaining power provided by skills had been neutralised largely outside the work organisation itself. The drop in profit rates it produced (i) either drove capital to be relocated to other regions, activities or sectors, (ii) or led to the "selection" of firms that adopted technologies or work organisation systems aimed at de-skilling.

The second feature is that the algorithm does not make choices according to

an operator's productivity ratios at a given cost, but directly on the basis of the profitability opportunity (the overall profitability that will be obtained both by hiring a person and by not hiring a person). Unlike traditional selection systems based on the labour cost-productivity function, the algorithm does not infer results from the calculation of factors within a known function; rather, it deduces those factors from an approximate result. It correlates past performance with employee profiles and replicates decisions, but does not really know why. In the first case, the causal relationship between factors and outcomes must be known, in the second case, it must not.

Ultimately, what the algorithm does is modulating the need for working hours, or fishing for orders, of workers grouped into different types of pools (be they staff of an employment agency, freight pools in long-distance transport, or the "partners" associated with a delivery platform). As is well known, this need or availability is the basis for the profitability of this activity⁷.

This complex system used to control and manage *flexworkers* takes the shape of a mobile app that each worker is required to download and use on a daily basis. The app displays a weekly calendar that displays the times of day in different colours: "Green: availability, and here it tells you, let's say, the times when you can either be available or not. The colour tells you:

⁷ M2: And this morning when I woke up, another SMS [it's Thursday]: "N. your plan for Friday has been cancelled". There you go, we can keep going as long as we want [we are conducting the interview at his house in the afternoon], I'm not working tomorrow.

I2: You're not working tomorrow?

M2: Not today, not tomorrow, not Saturday until... technically until Sunday afternoon, unless it's cancelled.

I2: And warnings at short notice?

M2: Legally a minimum of 2 hours, otherwise people have to go to work.

I2: Because, in some cases, we have been told up to half an hour in advance.

available, additional available, planned, unplanned” (Cristian). Available means that you could be called. Green means on standby, a kind of unpaid on-call duty in which the worker is penalised if they are called and they do not answer or reply that they cannot come. Green is the default colour, with planned hours shown in yellow and sick leave in red (which only appears three hours after the company has been informed, as employees must give three hours’ notice that they cannot come to work if they are called in during their available hours). Darker yellow represents time off that has been requested and granted, that is, when a worker asks the company in advance to register these hours as unavailable and the company agrees; what for any other worker is basically free time. Unspecified times may appear in white.

Consequently, the algorithm encourages a strong willingness among *flex-workers* to take on working hours by creating an *overbooking* of available workers:

I don’t know exactly, I can’t tell you exactly, because this was explained to me by my boss once, but it’s not exactly annual. It’s different, works seasonally and as needed. Obviously. And they create those seasons using predictions based on the previous years, what they needed and the people they needed and took. Do you know what I mean? And of course, if suddenly it turns out that in the last two years, in week forty of the season, for example, we need eight hundred. What happens? They’ll ask for a thousand, even if they’re not needed... (Elisa, 34 years old, from Cádiz, former flex coach for Covebo at Ingram Micro, interview held in February 2020).

This is how it is known that the algorithm has real-time information on the “contracted” (i.e. zero-hour) workforce of the employment agencies with which the warehouse works. It requires them to have more workers than the system calculates it will use. Ultimately, it is a standby time production machine.

Standby time: time in a void

Numerous testimonies have been collected on how life is spent on standby over the eight years during which this study has been conducted. This situation is profoundly distressing for many of these people. Firstly, the time spent on standby searching for hours, deliveries or orders involves a high level of uncertainty in the weekly organisation of their working day. This uncertainty makes itself felt in work schedules, known as “plannings”, which are received at very short notice and can be altered at any point⁸.

The standby time of delivery workers also consumes much of what should be their free time, when they are supposedly off duty, as it effectively prevents them from sustaining a normal social life. These are workers who are usually posted away from their places of origin and are constantly made to move, therefore being uprooted from their communities of origin. In addition, the variability of shifts and work opportunities makes it impossible for them to plan any activities and trips with enough notice. On a day-to-day basis, it is not possible for these workers to take part in training courses, do sports or engage in leisure activities that require a stable weekly schedule and a commitment to participation.

⁸ M: What is exhausting is the app. For example, like what happened to me when I was staying at the agency house [accommodation provided by the temporary recruitment agency]. As I was leaving work on Tuesday, I got a notification from ISABEL [the app that informs drivers of their work schedule]: “Your *planning* for tomorrow has been cancelled”. I’m going to sleep. They cancel me, they cancel (?), they cancel the other person who comes in my car, but the girlfriend of the guy who was supposed to come in my car did not get cancelled. After 3 hours, when I was already settled in at home: “Natalia you are planned for tomorrow”. And of course, because I was the driver, someone had to take that girl, well, you have a day. When you were already thinking: “You’re free”, they put you back in, that’s the thing (Natalia, 30 years old, Valencian, order picker in Bol.com, December 2022).

Standby time is time spent in a void, time that does not pass; and it is therefore difficult to have a clear idea of how long it lasts or what things are done in the meantime⁹.

This standby time is highly distressing, because it means living in a meaningless time regime. Time-related hardship, especially in repetitive and monotonous work, has traditionally been associated with the body's physical and mental activities, as well as with the length of exposure to certain rhythms, positions and efforts. But here hardship stems more from inactivity. How can they keep their body inactive? Various strategies for coping with these periods were identified in the interviews; these were generally related to the pursuit of evasive states to somewhat make actions virtual: taking drugs, alternating between sleep and wakeful states, playing online video games, watching films and series, participating in social media, etc.

CONCLUSIONS, LOGISTICAL RATIONALITY AND THE PRODUCTION OF TIME

But all this time wasted, in which people are doing nothing, is it lost time? If this were the case, the model would be clearly inefficient and irrational. While it is understandable that fluctuations in demand, shipping and

delivery would ideally call for an intermittent workforce to be engaged only when required, it is difficult to see how such a model could remain sustainable or even profitable in the medium to long term. These are people who, after all, need to earn a wage that is sufficient to live and work each day, and yet, either they do not, or some companies pay this type of wage, but keep their workers idle for many hours each week.

The reason for this is that time in these factories is not produced like other commodities, particularly because time cannot be produced: "Labour creates value, but is not itself value" (Marx, *Capital* Book One, Ch. III: 63) and must therefore be attached to other commodities. But where does it come from then? If the consumer acquires or gains new time that can be converted into surplus, it is necessarily because other people lose it, give it away or transfer it. However, they lose time for themselves; they do not transfer it as working time spent producing a good, but rather, this time is produced when they remain motionless: it is time that is not really available to them either as working time or as non-working time.

The conclusion is that standby time is, however, *productive time*, that is, it produces surplus value (Rubin, 1974) because it is not lost, but transferred, so to speak, from the life of the delivery subject to the working time of the person who consumes their services. One cannot be understood without the other. This standby time in campsites, in car parks and at the main crossroads of cities must be linked to the time spent by those who consume the goods sent, transported and delivered by the delivery worker.

This has led to an increasing fragmentation of the working population between, on the one hand, the middle and skilled classes who can consume other people's time in order to devote theirs to realising the greater social, cultural and educational capital accu-

⁹ Yesterday, for example, what did you do? -Yesterday, I worked, I arrived, I slept, and... I got up at twelve or so, I got on the computer and... [...] Let's see, it's not like I have a timetable, I'm not that organised in that case. I'm more, a bit more like... whatever comes. Maybe I say: "Today, half an hour to cook, ten minutes to have a shower, a bit of time to play and then go to sleep. And I end up... [playing for a long time], I'll cook and I'll have a shower tomorrow morning. And sleep for a bit. In other words, I live kind of according to the plan. But yesterday, as I said, I fell asleep at half past four [in the afternoon]. I woke up at twelve, had a shower and played for two hours until the time came, and I said: "I'm going to work" (Walter, 23, order picker at Bol.com, Turnhout campsite, Belgium, in June 2019).

mulated; and on the other, a growing service class, subaltern workers whose role is, after all, to save the former's time (Dörre, 2011).

The middle and skilled classes have been subjected to intense discursive and material neoliberal pressures originated in management schools (Foucault, 1988; Laval and Dardot, 2010). These pressures are designed to produce a form of strong, self-disciplined subjectivity, which is shaped in order to autonomously—yet under external guidance—develop a specific *disposition* towards the productive use of the time freed up by the logistics of consumption (Örtenblad, 2020). This dynamic is further reinforced by what is known as “Uber effect” (Berger, Chen and Frey, 2018). It is therefore doubtful whether the appeals to consumer responsibility underpinning critical research of the “unveiling” variety—research that seeks to disclose the actors and processes concealed behind “clicks”, apps and the production of consumer goods—can yield any consequence beyond engendering feelings of guilt in individuals who rely on these services or purchase these commodities.

The people who perform these logistical tasks are an increasingly numerous group (Pesole and Urzì, 2018) and are instead subjected to a regime of non-time, marked by moments that could be described as neutralised life, provisionally understood as living on standby. Uncertainty, along with the need to remain constantly at the beck and call of logistical rationality, leads them to exhibit a weakened form of subjectivity, both in their capacity for negotiation and mobilisation and in their ability to exercise self-control and self-care. As a result, they find it difficult to construct an identity, develop medium- and long-term life projects or pursue professional careers, among other things (Lin, 2022). They do not display a proactive, resilient attitude, eager to seize every opportunity for engaging in work, but rather an expectant attitude, a willingness to be heteronomously moved

and engaged in work (Leschke and Scheele, 2024; Mischczynski and Klimec, 2024).

This new subaltern working class, which also includes other groups employed in similar “time factories” such as cleaning or care platforms, is in fact objectively opposed to the segment of the working “class” whose productive time it helps to free. This reflects a kind of “struggle for time” (Apostolidis, 2019), as the advancement of labour rights for the former leads to the erosion of the material conditions of the latter.

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