Anne Engelhardt

Logistical Chokepoints, Precarious Work, and Social Reproduction

Labour Conflicts and the Metabolic Rift in Ports and Airports in Brazil and Portugal

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Acknowledgement

You might imagine, from a comfortable distance, that people who live, year in and year out, on $6 to $10 an hour have discovered some survival stratagems unknown to the middle class. But no. (Ehrenreich 2010: 25)

Barbara Ehrenreich's perception in her book "Nickel and Dimed" is at odds with my experience. I have never been at a comfortable distance from such problems. When I read that quote, I felt uncomfortable that her text might not have been written for people with biographies like mine, or that my background might not be welcome in academia. Thus, my book is for anyone who has never had a comfortable distance from the problems of the working class. If you come from an academic background, from total and relative poverty, from a working-class family: We all have our perspectives and a knowledge that is rich. The best that academia can do is to ensure a democratic and open environment where we can share our knowledge and speak for ourselves.

Content

Abbreviations

ANAC: Agência Nacional de Aviação Civil (Brazil)
BE: Bloco Esquerda (Portugal)
CBA: Collective Bargaining Agreement
CLT: Consolidação das Leis do Trabalho (Brazil)
CGTP -IN: Confederação Geral dos Trabalhadores Portugueses
CIP: Confederação Empresarial de Portugal
CTP: Confederação do Turismo Português
CONAC: Conferências Nacionais de Aviação Civil (Brazil)
CUT: Central Única dos Trabalhadores (Brazil)
DAC: Departamento de Aviação Civil (Brazil)
EDP: Energias de Portugal
ETF: European Transport Workers' Federation
FEU: Forty Food Equivalent Unit (Standard Container Size, large)
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IDC: International Dockers' Council
ISPS: International Ship and Port Facility Security
ITF: International Transport Workers' Federation
LIS: Lisbon Airport
MoU: Memorandum of Understanding
PCP: Partido Comunista Português (Portugal)
PLSCI: Port Liner Shipping Connectivity Index
PS: Partido Socialismo (Portugal)
PT: Partido dos Trabalhadores (Brazil)
PSD: Partido Social Democrata (Portugal)
RAN: Rede Aérea Nacional (Brazil)
SDU: Santos-Dumont Airport in Rio de Janeiro
SEAL: Sindicato dos Estivadores e da Actividade Logística (Portugal)
SEPE: Sindicato Estadual dos Profissionais da Educação Rio das Ostras e Casimiro de Abreu (Brazil)
SINDESTIVA Santos: Sindicato dos Estivadores de Santos (Brazil)
SINDIPEDRO-RJ: Sindicato dos Petroleiros Rio de Janeiro (Brazil)
SIMAJ-RJ: Sindicato Municipal dos Aeroviários do Rio de Janeiro (Brazil)
SITAVA: Sindicato dos Trabalhadores da Aviação e Aeroportos (Portugal)
SNA: Sindicato Nacional dos Aeronautas (Brazil)
SNPVAC: Sindicato Nacional do Pessoal de Voo da Aviação Civil (Portugal)
TAP: Transportes Aéreos Portugueses
UGT: União Geral de Trabalhadores
VARIG: Viação Aérea Rio-Grandense (Brazil)

1. Introduction

It's an industry that's built on silence. And trying to get to the bottom of that stuff is extremely difficult. (UK30 2018: item 14)

1.1 A Story of Four Chokepoints

On November 23, 2010, Portugal is in the midst of a severe economic crisis. At nine o'clock in the evening, Lisbon airport is completely closed. A few stranded passengers are sleeping in the corridor. On a normal evening, taxis would queue to take people into the city centre. Instead, around 200 workers and union officials in red vests are standing in the narrow street in front of Lisbon airport. The red vests of the gathered crowd have a line written on them: "Greve Geral" (General Strike). This picket line marks the beginning of a 24-hour general strike, scheduled to commence the following day. However, it appears that members of the fire prevention staff and other categories of airport personnel have already vacated their posts, refusing to work. The general strike is the first since the 1980s. It is perceived as a revival of a tradition that had seemingly become a relic of the past. Four further general strikes will be held in the following three years, during which workers will challenge austerity measures such as privatisations, wage cuts, and a general worsening of working conditions and precarity. On the evening in which the strike is taking place, some workers at the picket line appear to be taken by surprise. One of them tells me that, at least in the last 15 years, colleagues would go home when they went on strike. However, on this particular day, it is different. Several workers remain at the airport and proceed to construct a picket line, utilising vests, flags, whistles, and chanting slogans. In the following 13 years, the airport, the national Portuguese airline TAP, and the aviation industry on a global scale encountered unprecedented levels of turmoil, a situation that was further exacerbated by the advent of the Covid-19 pandemic. When viewed from the perspective of the beginning of the general strike in November 2010, as seen from the vantage point of Summer 2023, this modest picket line appears to have been a harbinger of the significant events that were to follow.

Exactly two years later, in November 2012, on the afternoon of the third general strike in Portugal since the onset of the economic crisis, a joint demonstration was held by social movement activists and trade unions for the first time. I conduct an interview with the newly elected leader of the Lisbon dockworkers' union SETC (later SEAL), António Mariano, a former port instructor. The Portuguese government is in the process of introducing a new law that is intended to dismantle the closed-shop system in the ports. This development

has prompted a series of protests, with demonstrators gathering outside the local café in which we are talking. The protestors are predominantly comprised of young, precarious, and partially unemployed workers, students, and thousands of members of the two trade union federations CGTP-IN and UGT. For the first time, the dockers' union, which is independent of these federations, took part in the general strike and demonstration. You can hear them later. They cursed and used firecrackers during the march. And they are wearing yellow vests with a writing on the back that says: "Don't fuck my job". I ask António if they have a picket line at the port to ensure nobody works while they are at the demonstration. And he responds: "We are 300 workers, and all of us are here." He does not expect anybody else capable of doing the work instead. However, the new port law will permit the installation of private labour agencies within the port, often employing workers with limited or no experience. Following a period of general strikes and significant port strikes against labour agencies in 2014 and 2016, conflicts have arisen with new workers, resulting in the necessity for picket lines. Additionally, for the first time, dockworkers have experienced confrontations with police. The struggle over the port labour law has also spread to other Portuguese ports, including Setúbal in the south and Leixões in the north.

In July 2017, a general strike occurred in Brazil for the first time in decades. The following year, in March 2018, I encountered Selma Balbino, a former black airport worker, at the trade union office of the SNA. This office was located approximately a twenty-minute Uber journey from Santos Dumont Airport, the first Brazilian civil aviation airport. Her concerns regarding several recent accidents dominated the conversation with Selma. This included the precarious working conditions, the anger about the fake government audits, and the government's inability to intervene in unsafe working conditions, rather than the blockade of the airport during the general strike, particularly caught my interest. Brazil experienced a severe economic crisis a few years after the crisis afflicted Portugal. This period was characterised by the impeachment of the PT president, Dilma Rousseff, and the subsequent rise to power of the conservative Michel Temer. In the days leading up to my meeting with Selma, the city councillor, a black woman, Marielle Franco was assassinated by a former police officer, precipitating widespread mass demonstrations in major Brazilian cities. These events profoundly impacted Selma. Whilst she was engaged in discussing fights for safer and better working conditions, she also reflected on the increase of hate speech on social media, the *ódio* (pt. for hate), mirrored in increasing attacks on black, trans, and femme representing people.

In the same month as the meeting with Selma, a strike of dockworkers occurred in Santos, the largest port in South America in terms of space. The protest involved several hundred dockworkers marching in the sun, accompanied by a truck with giant megaphones and a group with drums. The workers ex-

pressed dissatisfaction with the trade union leadership, with the office of the trade union president being occupied not only by the president himself but also by other former and current trade union officials. The industrial conflict, it can be argued, emerged due to a change in the labour law, which enforced shorter shifts with a mandatory break time of 11 hours. This apparent improvement in labour standards subsequently led to a strike, but the question remains: how did this come to pass? A few days later, I attended the workers' strike meeting, where a fierce debate ensued among the workers concerning the continuation of the struggle.

This thesis is informed by the spatially embedded histories of these four chokepoints and their workers' occupational health and safety struggles. These struggles function as the central epistemological vantage point from which theoretical and operational considerations derive.

1.2 Chokepoints Between "Magic Bullets" and "Hyper-Surveillance"

In the context of a globally expanding and interconnected transport industry, chokepoints such as ports and airports have attracted scholarly and activist attention. It has been suggested that containerisation and the globalisation of production transformed the logistics sector into a space of enormous power for labour and social struggles. As outlined by Jake Alimahomed-Wilson and Immanuel Ness in the introduction to their edited collection *Choke Points* (2018), critical hubs within logistics networks can become the target of occupations or strikes, resulting in economic blockages. The emergence of internationally connected value chains, coupled with crisis-driven class struggles over the distribution of wealth, has led to an increased significance of chokepoints in the context of trade unions and social movement activism. In contrast, other scholars have drawn attention to the fact that chokepoints appear to function as laboratories for the implementation of surveillance, control, and security measures by companies and states. Furthermore, they regard them as terrains in which national labour law has been modified or undermined. Hubs of global logistics networks are subject to stringent regulations, including security checks, militarisation, camera surveillance, and in some cases, the right to dismiss employees without notice for security reasons. This potentially undermines the possibility of transformative, disruptive action in these nodes.[1]

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[1] See Edna Bonacich and Jake B. Wilson (2008): "Getting the goods"; Theo Notteboom and Jean-Paul Rodrigue (2009): "The future of containerization"; Craig Martin (2013): "Shipping Container Mobilities, Seamless Compatibility, and the Global Surface of Logistical Integration"; Deborah Cowen (2014): "The deadly life of logistics"; Neil M. Coe (2014):

The present thesis puts forward a third position, namely that the concept of chokepoints ought to be regarded as anything but a "magic bullet" for labour struggles, or as overregulated authoritarian spaces within which such battles are impossible to fight. In contrast, the focus is on workers' views of their workplaces, which are considered to be precarious and, consequently, dangerous spaces. The Social Reproduction Metabolism (SRM) framework is utilised to elucidate the nexus between precarity and the jeopardy to health and safety, including the very threat to the survival of workers. This analysis unveils a multifaceted dynamic, where precarity and risks for health and safety are intricately intertwined, forming a double-edged sword.

Precarity has been shown to simultaneously inhibit and facilitate trade union and labour activism at chokepoints. Consequently, chokepoints cannot be viewed as "natural" shortcuts to organise or advocate for enhanced wages, living, and working conditions in isolation. However, the organisation of workers can be facilitated when activists and trade unions take health and safety risks and precarity into consideration. Their struggles at chokepoints can move beyond the regional scale of the workplace and affect the national and even transnational state apparatuses and economic processes. There is a *potential* power, which is buried under fatal accidents, physical and mental congestions, disorganisation processes, and a general threat of a rift in the Social Reproduction Metabolism of the workers' labouring bodies.

Moreover, the Social Reproduction Metabolism lens, which is predicated on a materialist analysis of embodied labour, facilitates the analysis of the role of different state apparatuses in governing chokepoints and work via increasingly authoritarian practices. From the vantage point of general elections, economic development, and democratic rights, the two countries Brazil and Portugal appear to be diverging examples of Authoritarian Neoliberalism. From the perspective of Social Reproduction Metabolism, both states and their transport industries demonstrate parallels in the escalating exploitation of workers, both physically and mentally. The labour struggles of workers at chokepoints are characterised by dual aspects: firstly, the refusal to continue subjecting their bodies to the conditions imposed by the transport industry; and secondly, the challenge to the absence of welfare, legal protection, and the suppression of strikes by the state.

This third position aims to enhance the discourse surrounding chokepoints and labour struggles from a theoretical, methodological, and empirical perspective. The ontology employed is Marxist-Feminist in approach, with a reflexive and activist methodology, and a relational and incorporated compari-

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"Missing Links"; David Jaffee (2016): "Kink in the intermodal supply chain"; Peter Cole (2018): "Dockworker Power"; Jake Alimahomed-Wilson and Immanuel Ness (2018): "Choke Points"; Brett Neilson et al. (2018): "Logistical Asia. The labour of making a world region" Laleh Khalili (2020): "Sinews of Trade and War".

son. Materialist theories on logistics, the body, and the state are also utilised, and will be specified below.

Statistics from the World Bank and IATA demonstrate that chokepoints are central to the global economy. There has been a substantial increase in international transport since 1970. Aerial passenger transport is nine times higher than in the 1970s, with approximately 4.46 billion passengers arriving and departing worldwide in 2019.[2] Freight transport via air has increased by more than 400 per cent in terms of both volume and distance.[3] As IATA (2019) points out, the time-sensitive commodities transported via air account for less than one per cent of global freight volume, yet represent one-third of global commodity value. As passenger and cargo numbers grow, so too does the lack of airport capacities and infrastructures. This has led to a growing number of economic bottlenecks. Globally operating institutions such as IATA (2019) are lobbying states and local governments to invest in airports and stop unjustified charges against airlines or "unnecessary sustainability investments" (IATA 2024: 36). However, it is evident that there have been apparent backdrops with the financial crisis from 2018 onwards, which later conflated with the global health crisis triggered by the novel corona virus (Covid-19) (IATA 2020: 11). Historically, the global aviation sector has never been affected so strongly, not even after the security crisis triggered by 9/11 in the United States. The available data indicates a 60.32 per cent decrease in passenger transport between 2019 and 2020.[4] In the context of a pandemic, airports turn into global super spreaders. Speed is the business of aviation with severe advantages for tourism and the capitalist economy but disadvantages for global health (Harris/Keil 2018: 173).

While speed is the business of aviation, volume is the business of maritime trade. It is estimated that between 80 and 90 per cent of global commodity volume is transported by ships across the sea. Sea trade grew by more than five times between 1970 and 2019. In 2024, more than 109,000 commercial ships crossed oceans and passed rivers worldwide with a capacity of 2.35 billion dwt (UNCTAD 2025). Despite the focus of recent studies on containerisation as part of the "logistics revolution", it is evident that container freight accounts for a mere 14 per cent of maritime trade, ranking third behind oil tankers (28 per cent) and dry bulk carriers (43 per cent), which dominate the global sea transport sector (UNCTAD 2024). A parallel can be drawn between the situation of ports and that of airports. While demand for capacity at ports is increasing, states and local governments are not adequately responding to the

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2   World Bank Air transport, passengers carried: https://data.worldbank.org/indicator/IS.AIR.PSGR [Access: 20.02.2021].
3   World Bank air transport, freight: https://data.worldbank.org/indicator/IS.AIR.GOOD.MT.K1 [Access: 09.01.2021].
4   Airports and airlines reported a decline in revenues of between 98 and 89 per cent for the year 2020 (IATA 2020: 12).

needs of globally operating companies, resulting in ports becoming severe bottlenecks for regional, national, and global economies.

The term "chokepoint" was initially coined in the context of warfare, where the organisation and orchestration of violent action are of central importance. In the military definition, chokepoint means the central passage, for instance, a tunnel or a bridge that the antagonist army passes. Destruction or blockade cuts the antagonist force from its path. However, a chokepoint can also be considered a metaphor for a violent physical interaction with a body. To choke someone means to strangle the neuralgic spot between the head and body as a threat to interrupt the oxygen and blood circulation. The body in question can be compelled to relinquish its resistance or be eradicated. Embodied labour is exhibited at chokepoints, for instance, in the physical materiality of workers, who at a certain juncture may potentially "choke" the economy and the state through stoppages and blockades. Moreover, transport sector workers, and to a greater extent during the period of the pandemic, are themselves at the "chokepoint": They experience a sense of being overwhelmed by physical and mental congestion, fatal accidents, or exposure to viruses, compounded by dismissals.

In the contemporary discourse on chokepoints and the "logistics revolution", the definition of the term has remained largely consistent with its military origins. However, it has been contextualised within the broader framework of economic, political, and social interaction, as well as power relations. In contemporary scholarship, particularly within business studies, economic geography, and industrial relations, the term "chokepoint" is frequently employed to denote the critical vulnerabilities of the global value chain. "… [T]he fact that global production depends on extended supply lines means that these lines can be cut" (Bonacich/Wilson 2005: 74). The interdependence of global production on supply chains is related to the increase of cross-border trade in recent decades, as well as the growing role of exports and imports in comparison to domestic trade (Fischer et al. 2010: 8-9). This phenomenon has been explained by several authors from different disciplines and theoretical approaches. One such explanation is the introduction of the container, which standardised global trade, minimised transport costs, and thus allowed the expansion of cross-border circulation of goods. This development was initiated by the "logistics revolution". (Bonacich 2003; Levinson 2006; Notteboom and Rodrigue 2009; Bensman and Jaffee 2016). Given that containers are primarily transported by sea, a significant proportion of literature addressing chokepoints categorises ports as sensitive global circulation areas. In today's global trade landscape, a significant proportion of ports function as pivotal intermodal transhipment hubs. These critical logistics nodes facilitate the seamless transfer of substantial volumes of goods, typically stowed in containers, between various modes of transportation. This process, as outlined by Jaffee (2016: 3), involves the intermodal transfer of goods from

sea to land and vice versa, underscoring the importance of these ports as crucial nodes in the global supply chain network. In critical logistics, ports are regarded as "the space in-between national territories" and "a space of transition, a three-dimensional zone subject to specialised government" at sea (Cowen 2010: 604).

Not only ports but also airports are central chokepoints for circulation. Globalisation is not limited to the production of goods but has extended to services. One factor for this process is the rapid development and expansion of the Internet. Online platforms are used to find workers for various temporary services (Kassem 2024). Additionally, as transport costs have declined, commuting has become less expensive, too, which allows requesting services increasingly from all over the world (Wöhl/Lichtenberger 2021).[5] Aeroplanes convey not only passengers and workers but also perishable, light, and high-value goods. Hence, airports exhibit the same characteristics as those described above for ports: They, too, are intermodal transhipment points, as both passengers and goods are transferred to other modes of transport, and in the majority, they also represent transit zones between nations. Airspace and the air border also delineate "a space of transition, a three-dimensional zone subject to specialised government", as quoted from Deborah Cowen above.

Chokepoints are places where historically and spatially embedded infrastructural circumstances slow down commodity circulation and endanger exchange value realisation. In the Chatham House Report from Rob Bailey and Laura Wellesley (2017: iv), 14 global maritime, coastal, and inland chokepoints are analysed that at that time potentially threatened the supply of critical fertilisers and food. Those crops, such as maize, wheat, rice, and soybeans, feed 2.8 billion people worldwide. Only five years later, several of these chokepoints, such as the Suez Canal or the Black Sea, that were reported about, have become interrupted due to geopolitical tensions and military conflicts (UNCDAT 2024).

An essential feature of global chokepoints is the lack of alternative transport routes to avoid any danger of disruption (Bailey/Wellesley 2017: viii). Besides rising prices, interruptions could lead to severe hunger crises in different parts of the world. The report states that the chokepoint risks increase due to climate change and rising sea levels (ibid. v). Additionally, the new economic crisis from 2018 increased political and economic tensions in and between imperialist states. Those tensions lead to a further decline in globalised trade, protectionism, regionalism, and socio-political struggles in logistics (UNCTAD 2020: xi). Not only activists and trade unions but also states and companies might use critical chokepoints and their "logistical power" to enforce tariffs or political concessions (Gregson et al. 2017; Farrell/Newman 2020).

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5   See for the impact of Covid-19, for instance, on care workers in circular migration Leiblfinger et al. (2020) and Lichtenberger/Wöhl (2021).

1.3 Selecting Brazilian and Portuguese Chokepoints

For the analysis of economic chokepoints in this thesis, I selected two ports and airports from Portugal and Brazil. As I explain more in Chapter 4, these places are connected by their shared colonial, political, economic, social and linguistic history and geography.

One detected global coastal chokepoint is the South-Brazilian primary port of Santos, the largest Latin American port and a significant hub for China's soybean supply (Bailey/Wellesley 2017: 33; Arboleda 2020: 63). A lack of investment in road and rail connection between the soybean plantations and the port, the risk of floods, the lack of further (spatial) capacity against a growing (Chinese) demand, and the record of strikes at the port have led to several disruptions in the past decade (Bailey/Wellesley 2017: 115). Nevertheless, a number of these rationales for interruption can be traced back to Brazil's (post) colonial history, from which the nation has yet to fully recuperate.

The history of the port of Lisbon is intricately interwoven with the colonial and spatial development of Portugal. Although relatively small in size, the port of Lisbon holds significant economic importance for the Portuguese national economy. The port's significance is further underscored by its distinction as the first container terminal in the Iberian Peninsula. The port's history is marked by notable industrial actions, particularly in the period following 2014, when dockworkers successfully resisted the trend of casualisation through collective action. A notable risk factor for disruption is the presence of a strong unionised workforce, which has played a pivotal role in organising other ports along the Portuguese coast and islands. One such port targeted by the union is the container port of Sines, which was constructed in 2004 and is located in the south of Portugal. The globally second largest port company Singapore Port Authority (SPA), is known for low wages, union-busting, and a comparably low union density. Sines has become Portugal's most modern and largest container port, with a comparable Port-Liner-Shipping-Connectivity-Index[6] as Santos. Therefore, the Portuguese dockworkers' union SEAL tries to organise the workforce and the struggle against precarity.

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6   Port-Liner-Shipping-Connectivity-Index (PLSCI) is generated of 900 global container ports along six components: number of ship calls per week; total deployed annual capacity on TEUs; number of regular liner shipping services for arriving and departing ships; TEU service for largest average vessel size; number of regular connections to other ports through direct liner shippers. "For each component, we divide the port's value by the maximum value for the component in 2006 and then calculate the average of the six components for the port. The port average is then again divided by the maximum value for the average in Q1 2006 and multiplied with 100. The result is a maximum PLSCI of 100 in Q1 2006. This means that the index for the port China, Hong Kong SAR, Hong Kong in Q1 2006 is 100 and all other indices are in relation to this value" See also the UNCTAD Website, https://unctadstat. unctad.org/wds/TableViewer/summary.aspx?ReportId=170026 [Access: 25.01.2021].

The ports, Santos in Brazil and Lisbon in Portugal, are connected via their colonial, economic, and political history and the mutual solidarity of their workers (Varela/Paço 2019). Frequent exchanges between dockworkers via international trade unions such as the ITF and the IDC at workplaces, conferences, and shared surveys characterise and influence those workers at chokepoints, analysed in this thesis.

There are also airports next to ports whose spatially embedded economic activity can be disrupted. Yet scholarly attention has primarily focused on ports while airports as chokepoints are under-researched. And yet, the security crisis after 9/11 and the health crisis due to SARS in 2003 and Covid-19 have once again disclosed how vital airports are for the global value chains, especially regarding time-sensitive commodities and passenger transport (IATA 2020: 11).

While Portuguese colonialism has shaped the patterns of ports in Latin America, it also has influenced the spatial decisions for airport constructions and the neocolonial policies of the United States and Germany (Cushman 2006: 176).[7] In 1938, the first Brazilian airport for civil aviation was opened in Rio de Janeiro, called after Alberto Santos Dumont, a Brazilian-French aviation pioneer. At this time, Rio de Janeiro served as the capital of Brazil. The airport became, for instance, a battleground for workers before and after abolishing the military dictatorship in the 1980s. Today, Alberto Santos Dumont is the 6th biggest airport countrywide, predominantly serving as a domestic aerial hub with significant connections to São Paulo and Brasilia.

The Lisbon Airport in Portugal was inaugurated in 1942. It was primarily a military hub for all sides of the Second World War. In the 1960s, it served as an army base for the Air Force. The Portuguese state fought against the anti-colonial uprisings in the African colonies of Portugal. In 1973, it became the battleground for a pre-revolutionary strike of independently unionised machinists and airport workers who used the airport as a conference meeting hall, clashing with the police. The labour history of the Lisbon airport shows some parallels to the regional airport of Rio de Janeiro. Today, and because of the

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7   The term neocolonialism is used in accordance with Gregory T. Cushman's (2006: 176) definition: "As an analytical concept, neocolonialism seeks to explain the lasting external dependence of postcolonial states and peoples, as well as the long historical persistence of global power structures after formal decolonization. Neocolonialism (or "informal empire", as it is sometimes known), also represents a particular historical era in the relationship between the Great Powers and the rest of the world. Neocolonialism has been called "the American stage of colonialism" in recognition of the marked tendency of U.S. international relations to take neocolonial forms, particularly in the Western Hemisphere during the first half of the twentieth century". As neo-colonialist traits still prevail, the definition is added by Aram Ziai (2020: 129), who writes "The theoretical core of neocolonialism remains the control of the economy through foreign actors as the exemplary manifestation of the continuity of colonialism".

massive increase in the Portuguese tourism industry, Lisbon has a higher annual passenger movement than the domestic airport of Rio de Janeiro.

Lisbon airport ranks among the 20 largest airports in Europe and has seen a massive increase in passengers due to considerable growth in tourism in Portugal. Both airports in Brazil and Portugal are indirectly connected via their history. Today, they are joined by the mutual solidarity of airport workers, who meet and connect less frequently than dockworkers but share their views via social media and trade union activity.

By the nature of their work, workers at chokepoints are internationally connected, as the interruption of commodity flow in one site may directly affect the other (Jenss/Schuetze 2020: 90). They work with the same cargo, container, vessel, or group of passengers. The connection might, in some cases, be stronger when sharing the same language, but is not limited to it. They post photos of the sky in the early morning when they start working. They share poems, family events, and grievances when losing colleagues in fatal labour accidents. They send solidarity messages, joy over victorious strikes, and analysis of "their" sector.

1.4 Fieldwork and Research Questions

Moreover, chokepoints have been conceptualised as sites where social movements can exert economic and political pressure, for instance, through the implementation of flight and lorry blockades. The concept of "logistical power" is a recurrent theme in emerging studies on industrial relations, labour disputes, and contemporary social movements (Schmalz et al. 2018; Moody 2022). Conversely, there is the surveillance of chokepoints via camera controls, fences, etc., which might prevent workers from organising (Cowen 2010).

Initially, I aimed to research the second assumption along with Cowen's perception of chokepoints as vulnerable spaces for struggles and as spaces of surveillance. However, in several of the 68 conducted interviews that I use in this thesis as essential data, informants both in the port (handling, lashing) and at the airport (handling, transfer of people with walking disabilities, call centre) frequently made unsolicited reference to the last (fatal) accident in a port or an airport. In English, there is a distinction between security and safety. However, there is only one word for both in Portuguese: "segurança". When I asked in the interview, "What role does security play?" the question was primarily answered concerning physical safety and not concerning the increasing surveillance of chokepoints or workplaces.

From the perspective of the interviewed workers, precarity means a lack of safety. A lack of safety means a threat to their bodies and those of their col-

leagues at ports, airports, ships, and planes. The precarious nature of employment conditions has a significant influence on the physical vulnerability and reproductive capacities of workers. From the background of this observation, I developed a theoretical approach to capture this embodied experience of work, which I call Social Reproduction Metabolism.

The issues of safety, family, and kinship have been identified as central elements in the struggle of port workers in Portugal and Brazil against precarious working conditions. In the context of the privatisation process of the national airline TAP, airport workers have highlighted safety concerns. They have also noted the increasing trend of casualised call centre employment and Ryanair's efforts to reduce the number of cabin crew members. Brazilian airport workers have reported instances of casualised colleagues lacking adequate safety training.

Both countries, Portugal and Brazil, recently went through financial crises. Governments introduced austerity measures and privatisation programmes. Port and airport workers also referred to labour reforms such as the Brazilian labour reform of 2017 or the austerity measures brought in by the Portuguese governments between 2011 and 2015. The impact of these events on their professional and familial lives was significant. While expecting the interviewees to speak about wage losses and the fight for jobs, they foregrounded social reproduction and health and safety issues. While I expected the obstacle for them to unionise would be the growing surveillance of chokepoints by the state and companies, they spoke instead about the increase of accidents, mental illness, and isolation in their jobs.

Based on these pre-considerations and the observations made during fieldwork, the thesis aims to answer the following questions:

1) If workers and activists can exercise logistical power through chokepoints (ports and airports), why are there still precarious working conditions?

2) How does the restructuring of work at chokepoints, through monitoring, regulation, laws, legislations, and directives, affect the bodies of workers?

3) How do trade unions and social movements address authoritarian practices and restrictions on the social reproduction of workers and develop strategies for (re)obtaining decent jobs at chokepoints?

1.5 Findings and Theoretical Approaches

Precarious and dangerous working conditions are a double-edged sword when organising. On the one hand, they lead to an enormous workload and concern for the workers' physical and mental health. To minimise this burden, many colleagues initially tend to seek individual help. They take antidepressants, are

not getting organised, and stay "below the radar" not to accumulate more stress and further burden themselves and their families.

However, if organisers and trade unions succeed in placing health and safety problems and temporary employment at the centre of disputes, the possibilities for successful organising increase. In struggles against precarious labour, chokepoints can turn into critical spaces for economic, political, and social pressure on companies and national and transnational state apparatuses. By up- and downscaling grievance and resistance, workers can challenge precarious labour and achieve better occupational health and safety standards. However, socio-political and economic conjunctures and capitalist antagonist interests challenge their struggle. They need well-organised and democratic trade union structures with a solid strike fund and strong connections with local social movement networks and international trade union apparatuses.

My research project employs a theoretical approach drawn from social reproduction feminism (SRF), which centres on body politics at work and the forms of struggles and alliances linked to them. SRF suggests looking at capitalism through the lens of the worker who is produced "in a double sense, through biological reproduction and as bearers of labour power." (Bhattacharya/Ferguson 2018). The history of capitalism is the history of class struggles and, therefore, a "history of the biopolitical and corporal battery" (Hien 2018: 309; own translation [AE]). The constant development of the forces of production leads to a continuous reorganisation of labouring bodies and how they can reproduce. That impacts workers' possibilities for forming alliances and organising struggles.

As Joseph Fracchia (2005: 52) has pointed out, the reinvention and reorganisation of the capitalist mode of production are limited to the "boundaries of human beings". However, governments and companies constantly challenge these boundaries, for example, by prolonging the working day, forcing workers to carry heavier loads, consuming cheap junk food, or drinking spoiled water. Death is the ultimate limit of the physical and mental exploitation of the working body. And more, it is the inability to reproduce the next generations of workers.

Workers have to commute long(er) distances and work longer hours, leaving them with little reproductive labour time. Additionally, changes in the industry, in the welfare state, in food prices, and so on, require new ways of organising family, food, education, and care, giving rise to new industries, such as mass production of meat, fast-food chains, and delivery services.

A Marxist perspective on the body in the labour process and industrial action is essential to understanding these processes. Such a perspective must deal with concrete workplaces to know how the relationship between body and work and the constant attempt of the capitalist system to shift boundaries of nature, including the human body's physical limits, affects workers' ability to resist and organise in specific instances.

Logistics enables the production and circulation of capital. But it also feeds back into the sphere of reproduction. Logistics makes variable capital available by transporting workers from their households to various workplaces and back. Additionally, it transports necessary food and services to homes, allowing them to reproduce the worker. In this sense, the logistics sector can be regarded as a bridge connecting the spheres of production and reproduction. The inclusion of labour conditions and organisation is critical to understanding the accumulation of capital. Still, it is often absent in logistics studies, particularly in transport management and history. The latter treats the motion as an abstract "driving force of progress" (Banister et al. 2009: 13) without considering human lives and bodies' physical re/organisation. Furthermore, there is a tendency in some studies to discuss the implementation of technological advancements as effectively independent miracles of some solitary genius rather than as social, economic, political and corporeally experienced processes (Rossant/Baker 2019). However, applying new technical innovations, such as railways, broadband, air travel, platform transport, flying taxis, etc., on a broader national or global scale impacts workers' labour conditions and social reproduction.

The physical materiality of space and the body of workers in this process appear as constant limits and thus create tensions in the operation of capital accumulation and the growing speed and volume of commodity transport. These physical limits and the continuous attempt of capitalists to overcome them lead to social and labour conflicts. The restructuring of the logistics sector and changes at the state level affect the organisation of work in the logistics sector and the reproduction of labour. The focus on the labouring body provides an entry point to developing a more sophisticated social theory of labour struggles at chokepoints and logistics. It offers crucial insights into organising trade unions and strikes in the transport sector.

1.6 Structure

To answer the questions and deepen the theoretical approaches to the findings, I will first outline my methodological considerations (Chapter 2). Here, I explain how I depart from a positivist understanding of social science and why I employ a Marxist-Feminist ontology based on the assumption of internal relations and dialectical materialism. This chapter introduces the parameters of spatio-historical and spatio-corporal vantage points, real abstraction, and levels of abstraction to illustrate and structure epistemological perceptions on which I base the thesis. Along with post-positivist considerations, an incorporated and relational research design will be introduced, which I will use in contrast to formal comparative methods. The chapter on methodology includes reviews

on Marxist-Feminist quality criteria for a qualitative social research design and an overview of the applied methods and evaluation techniques.

After the methodology chapter, the thesis departs from a classical structure with a clear cut between theory and empirical analysis. Instead, this work encompassed three essential parts: 1) Logistics, 2) Social Reproduction Metabolism, and 3) the State. Those sections each contain a literature review at the beginning, a theoretical approach, operationalising parameters, and an empirical analysis.

Writing is solely possible linearly, despite looking at multi-dimensional and reciprocal processes and dynamics. Thus, I must decide on a linear mode of presentation. Therefore, firstly, I discuss how capitalism is transforming the transport infrastructures and changes in Portugal and Brazil and how chokepoints in both countries have been developing and are historically and spatially connected. Secondly, I will introduce a materialist-feminist body theory foregrounding the idea of metabolism and the danger of a metabolic rift in the social reproduction of the labouring body. I settle this approach on Social Reproduction Feminism (SRF) and the ecological Marxist concept of human-nature metabolism. I will employ this approach to the port and airport sector labour conditions and the impact of the changing reproduction regimes in Portugal and Brazil due to neoliberal austerity measures. Thirdly, I will concentrate on the materialist state theory and how these two countries have been moving towards Authoritarian Neoliberalism in the recent period. The state section examines what role the different state apparatuses in both areas played in maintaining or interrupting the metabolism of the labouring body at chokepoints from the site of laws, austerity measures, and other apparatuses and institutions.

In the two chapters on logistics, I develop an economic definition and explanation of chokepoints in capitalism (Chapter 3), leaning onto Marx's discussion on distribution predominantly in the second Volume of Capital and the Grundrisse: I attempt to refresh the terms use-value, turnover time, storage, transport as production sector and commodity, and fixed and circulating capital. Those terms and observations along those categories are combined with the relatively newly coined field "critical logistics". In the empirical part (Chapter 4), the specific conditions for the emergence of the coastal and aeronautical chokepoints in Lisbon, Santos, and Rio de Janeiro are discussed in their specific spatial and historical settings.

Key questions that inform the third chapter are: Why does transport in capitalism require a constant speed increase? Why can't the capitalist mode of production and capital circulation erase chokepoints and secure a seamless flow of capital? How is this reflected in the four chokepoints chosen for this thesis? This spatio-historical embedding of the four chokepoints also serves as a context for the changes in labour divisions, the impact on the workers' labouring bodies, labour laws, reproduction regimes, and struggles.

The three chapters on Social Reproduction Metabolism are linked to the analyses that Plehwe (2001) and Bensman/Jaffee (2016) have made: Due to the continuous changes of the chokepoints through growing productivity and automation, the division of labour is also changing. In contrast, an often-invisible layer of dock and airport workers still exercises physical work in the loading and unloading area or at the waterside. This work is low-paid and frequently covered by insecure contracts. The impact on workers in times of workplace changes regarding automation or new labour laws has been researched often without a clear concept of the worker. Industrial relation studies that concentrate on struggles tend to neglect the role of the body. The body is the physical receptacle of variable capital.[8] The impact on the physical entity and its social reproduction that makes work possible will be theorised to develop an epistemology of the labouring body (Chapter 5). The part employs the concept of the "metabolic rift" in the social re/production of the labouring bodies to carve out the risks and limits around specific changes in workdays, distances between the workplace and housing, etc. On that basis, it will be possible to understand the particular situation and choices to go for or refrain from struggles at chokepoints. I will refer to John Bellamy Foster and Jason Moore's ecological Marxism and transfer their approach to the corporal limits of labour at chokepoints. In the first empirical part (Chapter 6), I look at the gendered and racialised segregation and labour division at chokepoints through masculinist, feminine, and racialised exploitation patterns. And I will discuss specific risks of a metabolic rift in the reproduction of the labouring body, embedded in the concept of precarious exploitation patterns (Chapter 7). Here, the lack of health and safety measures and infrastructures and the application of protective gear by workers will be foregrounded.

Overall, the part on embodied labour seeks to elucidate the first significant research question of why there are still precarious working conditions at chokepoints if these spaces are considered spaces for logistical power. I will tackle the following sub-questions: Why and how are labour divisions at chokepoints gendered and racialised, and how does this impact the exploitation of bodies on the one hand and collective struggle on the other?

The third part on the state looks at the role of national and transnational state apparatuses in governing chokepoints (Chapter 8). Along with Poulantzas, I consider the state a crystallisation of past power struggles. Historically, the state and its apparatuses played a crucial role in forcing the double-free people to become wage labourers in the cities and at sea. At the same time, battles for the 8-hour day, maternity leave, occupational health and safety, etc., have inscribed themselves into state regulations such as labour laws and legislations, bargaining contracts, and norms at workplaces. They limit how much capitalists can extract variable capital from the workers' labouring bodies.

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8   Important exceptions to this are, for instance, the studies of Becker et al. (2012; 2013).

Chokepoints emerge from a violent capitalist economic history to be used in political battles, foregrounding a general discontent with the state and the capitalist system.

This perception requires a closer look at the state and regions in which chokepoints emerge. Thus, I will combine the observation of scholars from the field of critical logistics on the role of the state in the logistics sector with a materialist state theory, the concept of Authoritarian Neoliberalism, and politics of scale. I will operationalise authoritarian, neoliberal and illiberal practices, using the works of Marlies Glasius (2018) and Alke Jenss and Benjamin Schuetze (2020) in which they unpack the term authoritarian practices as "sabotage of accountability".

In the empirical analysis (Chapter 9), I will look at labour struggles at the four chokepoints in the last 100 years and show how the state, those logistical hubs, and its workers are closely entangled. I will demonstrate that the state in each region employed different authoritarian practices to suppress trade union organising and strikes. I will use some essential laws and regulations to illustrate how the state plays a role in endangering the Social Reproduction Metabolism of workers at chokepoints.

The chapters on the state aim to answer the second and third main questions on how changing labour divisions, labour laws, and austerity measures affect workers' bodies and how trade unions and social movements develop strategies for struggling for decent jobs and dealing with authoritarian practices of the state. These are guided by the sub-questions of how the state governs the temporal and spatial conflicts in maintaining the workers' Social Reproduction Metabolism and how it channels and limits workers' resistance at chokepoints. I will use the lens of the body to look at different authoritarian practices that impact and limit health and safety measures and precarious working conditions at ports and airports in Brazil and Portugal.

I can justify the transferability between different countries on different time scales by comparing logistics in airports and ports in Brazil and Portugal. By laying out my definition of logistics, chokepoints, the state, the economy, infrastructure, the body in labour processes, social reproduction, and struggle, I create a reality that corresponds with what I believe is out there, time, space, and abstraction-wise.

I will use the collected material to illustrate my claims about the structures and actors that constitute chokepoints and the tensions that eventually lead to struggles for improved health and safety standards and allow the social reproduction of workers. In the concluding Chapter 10, I want to reconsider how dynamics and demands emerge in struggles that question and challenge the economic and political capitalist system.

2. Methodological Considerations

Have you ever tried to hop on a car while it was still moving? How different was it from entering a car that was stationary? Would you have been able to do it if you were not only blindfolded but didn't know in which direction it was moving or how fast it was going? (Ollman 2003: 11)

In trying to fit the two countries, Portugal and Brazil, and the two sectors, port and airport, into "cases", I came across several processes that go far beyond them. These include transnational and international political and economic dynamics, histories of past political and spatially inscribed procedures, and more. Finding a research design that allows for a structural openness to these cases, a multidimensional causality that still permits comparability and plausibility in my research is a challenge.

I decided to focus my comparison on three different perspectives. First, I wanted to understand the overall development of logistics and its role in capitalism from a Marxist perspective. Why and how could chokepoints develop despite the dependence of the circulation of capital on smooth transport? Changes in global logistics have different effects on ports, airports, and workers. These impacts are expressed in workers' and trade union struggles, not over wages, but over precarity, reproduction, health and safety. These changes are visible in the resistance to the ever-faster consumption of bodies in the industry and the lack of health and social services to reproduce the workforce.

The second point of view is, therefore, the labouring body. It is the natural but socially and spatio-historically constructed base of variable capital. It is a lens through which changes in the transport sector and the state in terms of welfare cuts, labour laws, etc. can be observed to a different degree than at the level of institutions, organisations, or other structures. Power relations such as capital and labour, white supremacy, and patriarchy are justified and expressed through different body characteristics, exploiting workers of all genders and ethnicities through division and segregation. There are racialised and gendered divisions of labour at the chokepoints. They are similar in Portugal and Brazil, but differ much more between ports and airports. Nevertheless, the history of Black Ports in Brazil is different from the history of colonial and contemporary Portuguese ports. Brazilian ports and the division of labour are linked to anti-slavery, land, housing, and Black emancipation struggles. This thesis connects Portugal and Brazil through their violent histories and more recent economic relations by "studying history backwards" (Hart 2018: 388-389). The two countries share a common past of colonialist extraction, slavery from the African continent, the mass murder of indigenous peoples in the Americas, and a trade network run by ships that needed ports as landing points; the end and beginning of millions of working lives. Portuguese history is inaccessible without understanding the role of the ports in the "making of Brazil" and vice versa.

Meanwhile, these processes at chokepoints, such as the racialised and gendered division of labour, automation, or the development of new segments of work, encounter very differently crystallised power relations in the two countries mentioned. The third level of comparison is, therefore, the state. Both Portugal and Brazil moved towards forms of Authoritarian Neoliberalism, despite having governments from opposite political camps. Portugal had a centre-left government, and in Brazil, a coalition of right-wing parties formed a minority government. The current conjunctures in their port and aviation sectors are linked to the general economic crisis of 2007/2008. It hit Portugal immediately, while the Brazilian economy stagnated in 2015, when Portugal seemed to be recovering (Vestena 2020a: 76). In both countries, governments used the banner of the crisis to implement austerity measures against workers. They changed labour laws and health and safety standards, privatised airport services and the airline industry, allowed subcontracting in ports and airports, and generally reduced the living standards and social welfare of workers and their families. These measures affected the reproductive regimes and bodies of workers.

I had to find a format and a theoretical ontology for these levels of comparison. In addition, my engagement with the field was a methodological puzzle. It varied from sector to sector, from country to country. However, my type of fieldwork generally contradicts positivist quality criteria such as reliability, validity, and generalisability.

For both of these methodological puzzles, the research design and the method of collecting and analysing data, I would like to extend Bertell Ollman's metaphor of analysing society without a Marxist approach to a general statement about methodology. Here, I understand methodology as "the study of the principles and theories" that "guide the choice of method" (Burnham et al. 2008: 4). Underlining political views and objectives need to be clarified and systematised, (Hay 2006: 79), otherwise my work may appear like this blindfolded person getting into a moving car if I do not elaborate on my underlining methodology. In this way, I may confuse readers/scholars and myself as to the direction in which I am moving.

To avoid this, in this chapter, I introduce a post-positivist methodology based broadly on historical materialism and more narrowly on Marxist-Feminist assumptions. Ludwik Fleck's (2014) concepts of *thought collective* and *style of thoughts* are important vectors in my research. This chapter foregrounds the importance of disclosing ontological claims (Wullweber et al. 2014: 16). It discusses ontology, epistemology, and the consequences of research design and methods together. This mode of presentation emphasises that the three must be directly linked and cannot be developed in isolation. My research follows the post-positivist assertion that there is no objective reality and therefore opposes positivist research, quality criteria, case selection, data collection, and evaluation. As Joscha Wullweber and Christoph Scherrer (2010) state, "there is no ahistorical and transcendent explanans (like universal laws),

which exhibit a (socially) independent variable." Therefore, rather than "looking for causalities and conclusive explanations, there is a search for plausibilities and plausible reasons".

The aim is to highlight the importance of internal relations in revealing invisible processes such as the reproduction of labour and working conditions in the transport sector. I use Robert Havemann's and Gillian Hart's non-dogmatic understanding of dialectical materialism to construct general epistemological standpoints of Marxist-Feminist theory. These are i) spatio-historical and ii) spatio-corporal parameters; iii) real abstraction; and iv) levels of abstraction. I will also employ Gillian Hart's and Phillip McMichael's considerations on incorporated and relational comparisons.

I then reflect on my role as an engaged scholar in writing theory and acting in the field. Aspects of Michael Burawoy's Extended Case Method (1998) will be used to address this tension between a distant and close relationship to the field and the consequent effects on power and content. I will also use participatory, activist, and feminist ethnographic approaches to develop quality criteria for Marxist-Feminist studies and fieldwork. The final section will present and discuss my qualitative research design.

2.1 Ontological Atomism, External Relations, and Formal Comparison

The ontology critiqued in this chapter is what Colin Hay calls *ontological atomism*. It is the political foundation of positivist research. Ontological atomism underpins the Hobbesian concept of the "individual motivation" of each member of society and refers to the rationally informed choices of the individual (ibid. 91).[9] For Hay (2006: 81), ontological atomism obscures specific features of "social groups", "human needs" and "social interaction". Scholars using an atomistic ontology neglect context, e.g., conflicting claims about a particular social "thing", which inevitably depends on space, time, and political, economic, and social conjuncture. This ontology is guided by the positivist approach of finding "natural laws" that are generalisable and independent of space and time (Novy 2002: 3). Ludwik Fleck (2014: 216), a biologist and physicist, has pointed out that scholars who claim to have found certain laws

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9   An example of ontological atomism is rational choice theory with a strong focus on agency. As Hay (2006: 91) points out, there is a contradiction in this theory: Rational Choice Theory only appears to be focused on agency at first glance. However, because the theory assumes that actors will always use the same rationally informed courses of action, actors themselves become interchangeable because they depend on a fully structured rationality. Thus, their decisions are always predictable. Ultimately, the actors themselves become obsolete, as the concept reflects only the rationalities according to which they act (ibid.).

detached from time and space may eventually be forced to cling to such findings even if they turn out to be wrong or outdated, since eternal laws do not exist for all time and all space. Thus, an *atomistic ontology* can indirectly lead to dogmatism and block the way for new ways of thinking and judging to emerge.

Marxist-Feminist scholars also criticise positivist science. In particular, they stress its problematic dichotomous view of reality, as it refers to "false" and "verified", or "subject" and "object", "ratio" and "emotion". They reject this duality in favour of more fluid, tense, and multidimensional concepts. "Feminist researchers celebrate knowledge gained from feeling and experience in everyday life" (Enslin 1994: 543).

Ontological atomism can be linked to what Ollman calls "external relations" as variables are considered independent factors that exist apart from one another:

> … [C]hange is viewed as external to the thing itself, something that happened (or will happen) to it, so that its new form is treated as independent of what it was earlier …, rather than as an essential aspect or stage of what it is (Ollman 2015: 10).

In ontological atomism or an ontology of external relations, individuals seem to act autonomously and in the name of their own calculations. Change also occurs as something outside or external to a studied phenomenon. The social whole of society is the sum of its pre-existing, finished, static parts (ibid.). Thus, "atomists" look through the lens of external relations, since all objects appear as free-floating only partially connected "atoms".

This ontological foundation has far-reaching implications for epistemological concepts and research designs. In the following, I will briefly discuss possible consequences for comparisons and case selection, quality criteria, and data evaluation.

2.1.1 Comparisons and Case Selection

The limitations of a "formal comparative method" revolve around Heloise Weber's (2007: 559) ensuing criticism as it is

> … [I]nextricably underpinned by temporal and spatial delineations that reproduce a particularly problematic analytical framework with significant political implications, not least because it obscures the globally constituted social dimensions of struggles for recognition and redistribution.

Formal comparison is based on either the creation of "cases" as closed entities, John Stuart Mill's method of agreement and difference, or comprehensive comparisons that look for theory-fitting features (Hart 2018: 376).

I have come across many processes that go far beyond the creation of spatially and historically closed cases. For example, transnational structures such

as the European Union and the IMF have influenced the infrastructures of these countries. In addition, the historical colonial link between Brazil and Portugal shaped the ports and, later, the airport industry in both economies.

Bernhard Ebbinghaus (2005: 134) sums this problem up as follows:

All comparative research of social entities, whether quantitative or qualitative, faces the problem of contingency, the fact that the potential pool of cases has been pre-selected by historical and political processes.

He points, for example, to the problem that states have changed over time in their spatial context. In the last fifty years alone, new nation-states have emerged around the globe while others have disappeared. They have changed borders and names or ceased to exist due to wars, mass movements, or jurisdiction (Brenner 2008: 67). How do scholars make a contingent historical comparison when they insist on states as independent "politically defined macro-social units" (Ebbinghaus 2005: 135)?

Unlike Ebbinghaus, I do not see contingency as a chaotic, unpredictable series of accidents. Instead, following a post-positivist approach, "the term contingency points to a structured uncertainty or, to put it differently, to a failed structuration" (Wullweber/Scherrer 2010). Accordingly, the concept of contingency allows for an oscillation between an "always strategically selective" structure and processes whose outcomes can neither be precisely predicted nor temporally or geographically fixed or fully circumscribed (ibid.).

From this rejection of closed cases as an analytical unit, it is a small step to explain why Mill's methods of comparison are not used either. Both the method of agreement and the method of difference require established causes that must be clear and static. The combination of complex factors and variables as processes dependent on space and time has no place in this separate and discrete thinking. This "methodological nationalism", as it has been coined in recent decades, seeks to explain social struggles and processes within the state as the sole "unit of analysis" (Weber 2007: 562).

Ebbinghaus (2015: 14) points out that such methods do not have "the means to explore transnationalization processes as such". They reduce states to closed entities and external factors to external closed systems. In short, comparisons are a political method and can create different forms of hierarchies, exclusions, otherings, and problematic relations, especially when they are based on an ontology of atomism.

2.1.2 Quality Criteria and Data Evaluation

Ontological atomism also has implications for epistemological approaches and research designs. It is founded on consistent quality criteria, including reliability, validity, and generalisability. However, following Bogner et al. (2014b: 94), I argue that quality criteria for qualitative methods must not be

seen as abstract universal laws. Instead, quality criteria are linked to the ontology used in the study and operate in conjunction with a particular political worldview (ibid. 92). A post-positivist view does not imply an "anti-positivist" or "anything goes" conception. In line with Wullweber and Scherrer (2010), I argue that each analysis requires plausibility.

Colin Hay (2006: 80) stresses the importance of knowing "the nature of the social and political reality to be investigated". This knowledge is relevant when dealing with different political theories and concepts in the "broad church" of Marxism. Ontological problems cannot be solved empirically because ontology, as a "philosophy of being", does not provide solutions but makes generalised claims. It manifests and sorts our general perception of the world and human beings; it opens a passage or a viewpoint to our fundamental understanding of reality (ibid. 82).

Hence, I will develop quality criteria based on a non-dogmatic Marxist-Feminist ontology.

2.2 Towards a Non-Dogmatic Marxist-Feminist Ontology

Hay (2006: 81) draws the focus away from the objective/subjective bias towards a distinction between atomistic and structuralist ontology. He contrasts this dichotomous atomistic thinking with ontological structuralism. Structuralism recognises "the complex interaction of material and ideational factors" (ibid.). Here, agency is seen as the result of the entanglement between contexts and structures that shape actors' intentions and strategies (ibid. 93).

Since social structures and contexts are always human-created and built on the crystallisation of (past) power struggles, structures and agency mutually influence each other. Dialectical materialism is a way of thinking that takes this mutual entanglement into account. It is understood here as an ontological theory and a method of inquiry. As an ontological theory, dialectical materialism is often subject to problematic claims, such as that historical change is determined by any contradiction that only needs to be revealed (Engelhardt/Moore 2017). Conversely, I understand dialectics here as a way of seeing phenomena as internally related, historical, and spatially embedded (ibid. 276). At an abstract level, in formal logic, a thing, A, can only be A and not B, and not A and B at the same time. However, dialectic adds time and space to a formal thing. Therefore, dialectical thinking allows us to see the internal relationship between A and B, or even a phenomenon being A and B simultaneously, even if it seems contradictory. This way of thinking is useful when discussing the relationships of processes that may have been mutually established and does not allow us to answer the tricky question of "which came first, the chicken or the egg" (Ollman 2015; Engelhardt/Moore 2017: 276).

Dialectical materialism can be understood as a "softer" approach to a structuralist ontology. Here, structures exist only through the relations and actions of agents. Accordingly, structures do not operate "'behind the backs' of the subjects, detached from the actions of the agents; rather, they are constituted actively (though not necessarily consciously)" (Wullweber/Scherrer 2010). This dialectical perspective offers many points of contact with Ollman's external and internal relational ontologies. Ollman (2015: 9) is interested in how change and contradictory phenomena are perceived. He introduces theoretical considerations with the argument that all subjects are shaped by the nature of their relations.

In contrast to *external relations*, an ontology building on internal relations sees phenomena as ongoing processes (e.g., depending on space and time) that are or are not evolving in relation to other processes. Thus, Ollman does not deny that phenomena have their independent characteristics. At the same time, however, they are always analysed in their temporal and spatial context. This means that the relations in which they appear (social phenomena such as struggles, gender, state, classes, unions, work, etc.) are not taken out of their internal context as independent individual things (Ollman 2015: 10).

Rosa Luxemburg (1987: 172), for example, characterises the Russian mass strike of 1905 as a

… [P]ulsating life of flesh and blood that cannot be cut out of the great framework of the revolution, but is connected to all parts of the revolution by a thousand veins.

From this perspective, the political ontology of the "nature" of capitalism must be viewed through the lens of these "thousand veins" or internal relations. The emphasis on "things" as related to one another allows a flexible approach to the agency/structure bias: For example, while from one perspective a capitalist state apparatus becomes an actor in labour law and affects struggles in ports and airports, from another perspective (and level of abstraction) it can become a field or structure for struggles. An ontology of internal relations also accepts that the social whole can by large extent the sum of its parts "and becomes, again over time, a major influence on the processes that have until then been the main influence on it" (Ollman 2015: 11). Thus, it is not necessary to reflect on all aspects of the social whole, but what is necessary is to pick out the essential dynamics driven by the often-contradictory internal relations within the social whole of the capitalist mode of production.

In summary, ontology is understood as a point of departure, not a point of conclusion. It helps to structure a meta-level on which I build epistemological claims. As I develop in the next section, Marxist-Feminism, which I have chosen as my political ontology, follows Hay's understanding of structuralism. I combine it with dialectical materialism and Ollman's (2015: 8) form of analysis of internal relations, which considers the changes of any phenomenon through space, time, and political, economic, social and cultural changes. These are driven by internal contradictions of related "things".

2.3 Epistemological parameters of Marxist-Feminism

Marxist-Feminism is a broad theory that attempts to access the social whole and its internal relations in their complexity and contradictions. It is often accused of being difficult or impossible to operationalise. Efforts have often been criticised for being too superficial or too complex.

In general, Marxism is understood here as: i) a systematic, always incomplete, analysis of the production, exchange, distribution and consumption of commodities in contemporary capitalism; ii) a method of analysing complex and contradictory social processes embedded in their spatial and temporal contexts; iii) a practice of supporting class struggles from below. Marxist studies are in constant need of revitalisation because of the struggles that are constantly bringing about new political, social, and economic changes (Ollman 2003: 11-12).

Marxist-Feminism looks at: i) specific internal relations to reveal invisible forms of labour, reproduction and struggle; ii) entangled processes between (e.g., technological) transformations in productive labour and how this affects reproductive labour and vice versa; iii) the labouring body as a hinge between production and reproduction and as a receptacle for variable capital. The body is exposed to changes in working conditions, laws, new technologies, and reproductive regimes and is consequently an agent of struggle (Ferguson 2008; Bhattacharya/Ferguson 2018).

However, scholars cannot develop Marxist-Feminist analysis out of pure thinking. It can only be formed in relation to the concrete things discovered in reality. With these challenges in mind, I still find it helpful to break down the primary ideas of Marxist-Feminism into four parameters linked to dialectical materialism, here as a method of inquiry. On this basis, I will later justify how I theorise embedded and relational comparison and logistics, the body, the state, and struggles in two very different spaces of the world: Portugal and Brazil.

Spatio-historical and spatio-corporal viewpoints, real abstraction, and levels of abstraction are, in my view, the four core assumptions based on Marxist-Feminism that help to answer the epistemological question: How can we perceive what is out there? While the first can be directly operationalised through the concept of materialist state theory, re/scaling, social reproduction, and the metabolic rift, the last two will be used as guiding terms to approach theoretical and empirical phenomena together with this work.

First, I will use a spatio-historical perspective to examine internal relations and structures in different times and spaces. Marx, for example, showed in the Grundrisse how a joint analysis of historical/temporal and geographical/spatial processes can explain various complexities. Here, he pointed out how the limitations of transport infrastructures pose a threat to the growth of capital. There-

fore, a constant improvement of transport and communication structures and technologies is required, leading to the "annihilation of space by time" (Marx [1850-1859] 1967: 438). Furthermore, in conjunction with the method, the socially produced spaces can be accessed, analysed, and embedded in their specific historical conjuncture (Hart 2018: 377). According to Havemann, social and historical processes differ from natural processes in that they are always unique and cannot be repeated.

In this uniqueness and finality of the historical process lies one of the predominant difficulties in grasping the regularities of this process (Havemann 1964: 108; own translation [AE]).

This assumption makes it necessary to examine the central historical antecedents of each phenomenon in order to understand its origin, its deviations from previous developments, and its future, which is only partially determined by its history (ibid. 93).

Time and space, or history and geography, seem to contradict and permeate each other: Just as time means change, space means fixation. All social phenomena oscillate between these moments of fixation and processing, between structure and action. Social processes take place in specific, historically shaped, unequal, and interconnected spaces. These spaces range from continents to nations, from chokepoints to gendered and racialised workplaces. Apart from the natural constitution of space (water, air, earth, mountains, desert), the power relations that govern spaces are relevant: what relations of domination shape spaces and to what extent? To quote Andreas Bieler and Adam Morton (2018: 99):

… [T]he spatial dynamics in capitalism's outward expansion is, … crucial, for the understanding of the wide variety of processes through which capitalism has become constituted in different geographical locations around the world.

To operationalise spatio-historical viewpoints, I propose to include the concept of re/scaling. It builds on a materialist ontology of internal relations and dialectical materialism. I will introduce the idea of re/scaling in section 8.5 to capture the regional, national, and transnational levels between which political and economic laws, regulations, and agreements are shifted up and down (Wissen 2009: 899).

Secondly, linked to the spatio-historical parameter, I add the spatio-corporeal perspective to examine how spaces enable and disable workers' bodies and their agency. It is not only the constant spatial expansion and temporal compression of capital circulation that transforms landscapes, infrastructures, and regimes of re/production. Scholars from and around the camp of critical geography tend to overemphasise spatio-economic relations and overlook the reproduction of labour and class struggle (Das 2017: 517-518). As feminist geographers such as Linda McDowell, Doreen Massey (1984: 197) and Amanda J. Flather (2013: 346) illustrate, capitalists have to discipline workers through

their bodies in order to extract surplus labour using patriarchal and colonist/racist power relations, which also create and shape space (Chattopadhyay 2017: 161). They are entangled with the capitalist dynamics of spatial transformation, crystallising power relations in concrete, steel, laws, norms, and culture, among other things. For example, gendered and racialised spaces constitute the division of labour between male and female workers. Or they reproduce the "colour bar" between white managers and black manual workers (Burawoy 1998: 8; Gough/Das 2016: 3). Both gendered and racialised patterns are found in dichotomous categories such as manual/intellectual or skilled/unskilled, well-paid/low-paid divisions of labour. These inscribed patterns of power relations in workplaces and places of reproduction are also spatially divisive. They bring various forms of sexism, trans/homophobia, and racism to the fore and have the potential to alienate working groups from one another (Orzeck 2007: 501-502).

However, if the history of capitalism is a history of class struggles and the biopolitical, spatial, and bodily battery, this means that the ongoing development of the forces of production requires a constant reorganisation of workers and their labouring bodies, breaking and recreating gender roles and racial stereotypes as necessary. It can also be a conscious act of resistance by workers and activists to redefine and challenge bodily experienced and inscribed categories and to build bridges of solidarity. Such bridge-building has implications for workers' ability to form alliances and organise struggles. Domination and resistance are also produced and experienced by individual and collective spatially grounded workers and their bodies (Brenner 2008: 66).

To operationalise spatial-corporeal relations and analyse how labour shapes workers' bodies and how workers organise struggles against their over/exploitation, I will combine strands of Social Reproduction Theory (SRT) and the theory of the metabolic rift (Foster 1999; Salleh 2010; Moore 2011; Rioux 2015; Dowling 2016; Ferguson 2016; Bhattacharya 2017; Bakker/Gill 2019; Mezzadri et al. 2021). Both concepts build on an ontology of internal relations. Social Reproduction Theory is introduced in section 5.2 to show how changes in the transport sector and state-mediated laws and austerity measures shape the labouring body. The concept of the metabolic rift is useful to operationalise the extent and limits to which a worker's body can be exploited. The conflicts between labour and capital over the Social Reproduction Metabolism (SRM) of the workers' bodies have a temporal and a spatial dimension, as will be explored in section 5.5 and empirically underlined in section 7.3.

Thirdly, I will use the term real abstraction to navigate between space, time, and socially and economically permeated bodily relations. This term captures internally related, repetitive, contradictory, and constitutive processes that shape and change structures. Already in discussing ontology and epistemology, scholars are challenged by abstractions as fragments from the fixed and fluid reality we access through our senses (Patel/Moore 2018: 47). According to

Ollman "real abstraction" is "the frequent repetition of an important social activity, like buying and selling, that instils a particular pattern in our thinking about just that activity" (Ollman 2015: 15). Real abstractions depend on the internal relations that are looked at and the theoretical questions we want to answer. They are simultaneously tools to describe the world, but also for "making it" (Patel/Moore 2018: 47). Economic processes such as commodity production, circulation, consumption and exchange *appear* to operate according to fixed rules and between equal agents. And *they do*; this is not just a liberalist or neoclassical claim based on atomistic thinking and the one-dimensional ideal type of homo economicus. The abstraction of these processes is historically embedded and reproduced.

Related to real abstraction is the term "fetish". When I use the words "fetishizing" or "fetish", I follow the definition of Michael Heinrich (2004). He points out that the fetishization of commodities is not only an expression of a "false consciousness" about the social production of commodities, but also contains real materialised violence based on unequal power relations (ibid. 71-73). The exchange value of the commodity reflects the objectification of social relations. All human beings in capitalism refer primarily to their common labour in commodities, not to negotiated and socially discussed needs and interests. It is indeed a mystical and ghostly process (McNally 2011). But this objectification of social relations is the inherent necessary character of capital accumulation. "Real abstractions" are put and maintained in motion by fetishizing them, e.g., detached from their social power relations, their history of inherited violence on nature and the living bodies of workers (ibid. 128).

Specific terms to describe and compare different processes can make things visible and others invisible. Making visible and making invisible can be both a violent practice and a form of resistance (Hart 2018: 372). For example, critical discussions of slavery, women's oppression, reproductive labour, toxic work environments, and the struggles of the oppressed for change have often been obscured and marginalised (Enslin 1994: 538). And right now, with the new global authoritarian shift, we see diversity programmes being cut, Black, trans and feminist histories being erased from institutional walls, bookshelves and curricula.[10] Introducing or re-using terms and guiding the readers' look to-

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10 Social science has long been a closed space with limited or no access for poor, female, black and, above all, illiterate people who were active in collective social protest but unable to write down their observations. Although the academic sphere has begun to open up, especially in the Western world since the late 1960s, it is still the case that predominantly white, upper-middle-class and upper-class men reserve the possibilities of observing and reflecting on society. For example, "feminism attracted relatively little scholarly attention until later feminism prompted its rediscovery" (Calhoun 1993: 388). This is true of the anti-slavery and early Black and People of Colour movements, but also, in a sense, of social movements in general. As Michael Burawoy (2014: 17) notes, early sociologists such as Émile Durkheim and Max Weber portrayed social movements as an irritation in what they saw as a fairly well-functioning society. This example of the pathologizing of political and economic contestation

wards other social areas can also constitute counter-narratives, de-fetishize processes, and deconstruct the history of capital accumulation as "bloodless" (McNally 2020: 2). Doing so could support movements in finding their own language to put grievances into words and possible slogans. This practice also counts for struggles in the logistics sector for health and safety and against precarity. It also holds more abstractly for the invisible workers' labouring bodies at workplaces and spaces of reproduction.

Fourthly, I use the vantage point of *levels of abstraction* to subsume the three forms of abstraction that Marx uses in his work. They form procedural steps for assessing reality in a dialectical materialist understanding: The first is the "mental activity" to detect a phenomenon. However, after that thought process, these separations must be "put back" into the net of their constituting internal relations to perceive them related to other aspects of reality (Ollman 2015: 15).[11] According to Havemann (1964: 133), there would be no science if we were not bold enough to cut into reality and separate phenomena from the "whole" and analyse their specific characteristics. In this way, we work with formal logic in order to separate, analyse, and reintegrate a phenomenon, recognising its tensions and contradictions in relation to its specific geographical and temporal reality. The means of formal logic become dialectical logic (ibid. 135).

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underlines that social movements and class struggle were often portrayed by social groups who lived and acted rather detached from it.

11   Ollman (2015: 15) uses the term "freedom" as an example: it cannot be understood without understanding its antagonist term, such as inhibition or imprisonment. Havemann (1964: 55; 71) puts it more abstractly: Every concept can only be understood by saying what it is not.

2.4 Relational and Incorporated Comparison

Comparison can operate as a means of critical engagement as well as a tool of oppression. (Hart 2018: 372)

I am now developing my research design based on these four parameters outlined above. However, it took me some time to find a comparative method based on Marxist-Feminism that would help to constitute and structure the findings without forcing them into pre-formulated cases and variables (Hart 2018: 373). I needed a comparative method that involved a structuralist ontology of internal relations. In this respect, I found Phillip McMichael's and Gillian Hart's reflections on historically and spatially embedded processes appropriate for the ontological claims outlined above.

An incorporated regards the comparative method as

… [A]n "internal" rather than an "external" (formal) feature of inquiry, relating separate processes (in time and/or space) as components of a broader, world-historical process or conjuncture (McMichael 1990: 389).

However, this world-historical conjuncture depends on its parts, which are geographically and historically contingent. Henceforth, the social parts and the social whole are not "permanent categories or units of analysis" (ibid. 386). Consequently, an incorporated or, as Gillian Hart (2018: 373) puts it, a relational comparison focuses

… [O]n spatio-historical specificities as well as interconnections and mutually constitutive processes – crucial to which is the non-teleological, open conception of dialectics.

Incorporated and relational comparisons link local and national processes to overall transnational conjunctures in the present and the past (McMichael 2000: 671). They are thus a way of comparing spatial and temporal processes and analysing the changing actors/structures with and within these processes. Consequently, I will examine labour struggles at chokepoints in Brazil and Portugal to meet the challenge of contingency, using terms such as processes and dynamics rather than static, closed "cases". In this way, I chose the multiple form of incorporated comparison, referred to by McMichael (1990: 389), as a research strategy

… [I]n which instances are analyzed as products of a continuously evolving process … Here, comparison reveals and posits a systemic process through the juxtaposition of instances in time …

I apply my research design along the analytical steps proposed by Alexander Gallas (2023) in terms of incorporated comparisons. In the first step, he uses a spatial entry point to the social whole of capitalism to analyse class formations on a global scale. He, therefore, maps various recent strikes in the non-industrial sector using four categories (ibid.). In my work, I use a historical

point of entry to a spatially framed area of the Lusophony and, more specifically, Portugal and Brazil. In a first step, I have assembled four concepts from Marx's thought on transport and logistics: the commodity's use value, transport as commodity and site of production, storage and turnover time, and fixed and circulating capital, to deliver a fragmented map of the transport history of Brazil and Portugal from the eve of capitalism to the present day. In this raster, I embed the respective maritime and air transport histories and the history of the four chokepoints, the ports of Santos and Lisbon and the Santos Dumont and Humberto Delgado airports.

In a second step, I use the lens of the labouring body to link the history of physical labour and its specific moments of gendered and racialised segregation in maritime and air transport to this narrative. I use the concept of exploitation patterns, dividing them along the lines of gendered and racialised segregation into masculine, feminine, racialised, and precarious exploitation patterns. Along with these patterns, I will bring together concrete examples of segregation and the embodied experience of precarious and dangerous work.

In a third comparison, I will discuss the state and its historical role in limiting the extraction of surplus value from the body and extending it through laws, regulations, and repressive state apparatuses. In this final part, I look at resistance and struggles at airports employing temporal and spatial conflicts on the Social Reproduction Metabolism in the struggles for decent jobs and occupational health and safety. At the same time, I analyse the authoritarian practices of the state apparatuses against the grievances of workers and their attempts to resist the over-exploitation of their bodies and the danger of a metabolic rift.

All three levels of comparison (logistics, body, and state) are, as Gallas (2023: 135) puts it, like "archaeological chart" to "compare and systematise traces and remnants of past human settlements and activities". I uncover layer by layer while looking at different timelines. When discussing logistics and Portuguese and Brazilian transport history, I will go back to the beginning of Portuguese colonialism, as its influence on Brazilian infrastructure is apparent today. When discussing the history of the racialised and gendered workforce and the temporal and spatial conflicts on Social Reproduction Metabolism, I refer to the period from the mid-17th century until 2020. In the analysis of the capitalist state, I will concentrate on the period from the beginning of the 20th century, looking at the first versions of capitalist state formations in Brazil in parallel with the first capitalist state structures in Portugal.

Capitalism is a complex and abstract system, connected through "more than a thousand veins" to different aspects of human and natural life. It represents a fractured, multi-layered, diverse, and elusive social whole. Concerning the political ontology introduced above, I focus on specific processes and histories of this social whole in relation to logistics and colonialism in the Lusophony. The working body in the metabolism between production and reproduction is

a particular level of abstraction that I embed in this spatio-historical process. Changes in the transport sector primarily affect the production regime of workers and their need to reproduce. State apparatuses operate at the national and international level and affect democratic and workers' (reproductive) rights as well as the transport and logistics industry. Both state and industry affect workers' bodies and limit their reproductive possibilities. The capitalist mode of production also uses older power relations, such as white supremacy and patriarchy, to create divisions of labour and deepen the exploitation of workers. This generates struggles in different ways and at different scales, both in the workplace and in the spaces of reproduction.

Struggles ultimately shape and transform the capitalist totality, mediated through other levels of abstraction. Workers' resistance through their labouring bodies cannot directly affect capitalism, but it can affect the lower levels of abstraction, such as the state apparatuses, the industry, or the racialisation and gendering of labour regimes.

My research design is somewhat similar to Marcus Taylor and Sébastien Rioux's *labour regimes*, which they first developed in their monograph Global Labour Studies (2018). They ask the critical question, "How are workforces produced?" Intertwining reproduction, mobilisation, motivation, and utilisation, they discuss household and state interventions, labour market segmentation, labour discourses and labour control to understand how humans become workers. The two authors base their approach on human geography, focusing on scale and space, critical political economy, Social Reproduction Theory, and other materialist concepts. However, while their method is useful for understanding the production of a particular labour force and its embeddedness in space, state, history, and different scales and networks, it lacks an analysis of resistance. Such an analysis is more profound when it focuses on the labouring body as the smallest unit and most concrete level of abstraction.[12] My focus is on how work shapes workers' bodies and leads to or prevents resistance, so I concentrate on Social Reproduction Metabolism.

2.5 Quality Criteria of Marxist Feminist Research

In this section, I draw a lot on the insights of critical disability studies, feminist and activist research and ethnography, critically reflecting on the role of the researcher in the field, issues of power relations and silencing. I also discuss

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12   Rioux (2022) has published a new chapter in which he brings the body and the embodiment of labour more into focus. However, his focus remains on understanding how labour is made from the outside, rather than how it is also an active part of the regime itself, challenging and changing it.

the possible and sometimes unavoidable damage and pain that observation, participation and interviewing can cause.

To quote Elizabeth Enslin (1994: 545):

> … [I]n a nonfeminist world, we cannot do truly feminist research. In a world shaped by gross inequalities of gender, race, caste, class, and geography, research done on the lesser privileged, by and for the ultimate benefit of the privileged is simply not ethical. We gloss over this inequality by claiming to be doing research with our subjects. By paying lip service to collaboration and dialogue, we mask the very real differences among us and the ways that our research continues to buttress them.

As true as this observation is, research can also allow activists and marginalised groups to process and reconsider their experiences and thoughts. It can help to find words, language, and strategies in the struggle against oppression, exploitation, and the everyday violence of the capitalist mode of (re)production. The question is how to limit the damage and increase the benefits for the groups being studied and for the field with which we, as scholars, might sympathise or even seek to support with our study.

As noted above, Marxism is a theory to support class struggles from below (Ollman 2003: 11-12). This practice requires a Marxist-Feminist ethnographic perspective, a "collective, dialectical process of theory building through struggles for change" (Enslin 1994: 545). This approach allows and encourages scholars to constantly update their studies of society. The thesis involves an empirical study based on a qualitative reflexive and activist research design based on these preliminary reflections.[13]

2.5.1 Reflexive and Democratic Thinking

As Burnham et al. (2008, 4) point out, any

> … [S]erious consideration of method in social science quickly runs into the thorny question of the relationship between empirical observation and theory of conceptualisation.

To navigate this "thorny" relationship, I use the quality criteria of Marxist-Feminist studies, which build on "reflexive" scholarship (Burawoy 1998). However, Burawoy (1998: 14; footnote 6) notes that neither positivist nor reflexive research requires ontological foundations. Instead, he argues, it lies "in the relationship of the scientist to the object" (ibid.). This claim runs counter to what has been developed in this chapter. Here, I have argued that this "relation" is based on the political or sociological ontology of the researcher (Hart 2004: 15). In addition, it can be asked: how is this relation initiated? What are the challenges of theorising and categorising on the one hand and fieldwork on the other? And how can these challenges be met?

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13   This design is named after Marion Hamm's (2013) contribution to a "reflexiven aktivistischen Wissenschaftlichkeit" which will be explored in more detail in section 2.4.3.

Trying to be sensitive to categorisation and conceptualisation is challenging. It means oscillating between being too descriptive and being too analytical (Fleck 2014: 213). As Brian Larkin (2013: 330) states,

… [I]t comprises a cultural analytic that highlights the epistemological and political commitments involved in selecting what one sees as infrastructural (and thus causal) and what one leaves out.

The same applies to the removal of any other aspect of reality. It can also be applied, for example, to transport technology and chokepoints as part of an infrastructural, but also capitalist, neoliberal, cultural, and social reality.

One helpful method is what Burawoy calls "reflexive science": As scholars, we need to remove the (imaginary) laboratory glass wall between us and the phenomena, hence including "our participation in the world we study" in our analysis (Burawoy 1998: 5). In this sense, it is crucial to consider who we are and where we come from, as different characteristics of scholars are not just contextual noise, but can create essential knowledge. Not only do we take a "thing", analyse it in its specificity, and "put it back" in its specific space and conjuncture, but we also discuss the theory around it and how the empirical study alters, challenges, or underlines certain theoretical assumptions. To this socio-economic consideration must be added a reflection on our collective thinking and style of thinking and the extent to which we allow our ideas to "mutate". According to Fleck (2014: 55), this is only possible in a democratic environment where many people with different and opposing interests, ideas, and ways of life meet and exchange their thoughts in a serious and playful way. This is what he calls a democratic way of thinking, which he sees as a slow but consistent way of developing knowledge that is close to (fluid) truth (ibid. 62).[14]

Today, this means opening up universities, international conferences, journals, studies, etc., to a wider public, freeing them from economic and competitive pressures, challenging all forms of discrimination, and finding different ways of expressing and translating thoughts in different languages and concepts. Such a practice is, of course, only minimally possible today, as the entrepreneurial forms in which many universities are set up are also severely curtailed by attempts to open them up.[15]

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14   As Burawoy (1998: 16) states: "science offers no final truth, no certainties, but exists in a state of continual revision."

15   See, for example, Burawoy (2014) in his text "Facing an unequal world", where he examines, along the ISA congress, the "uneven development of sociology across the planet", with only ten per cent of scholars attending from the lowest income countries and only 19 per cent from middle income countries. Furthermore, ten years after its launch, the Global Labour Journal reflects the presence of scholars from all over the world, with only a third of authors coming from the Global South and about the same proportion being women, see: Webster and O'Brien (2020). Such reflections are helpful as a first step towards redressing this imbalance, which is also structured by and embedded in capitalist power relations. However, given the current Trump administration in the U.S., it now seems to be becoming a much bigger fight

In general, qualitative analysis should be a team effort (Bogner et al. 2014b: 94). I tried to take advantage of every opportunity to do so. In particular, interpreting the material without discussing specific passages is much more challenging, especially as many of the interviews reflect violent, emotional, or tense experiences. During the writing process of this study, there was a lack of an interpreting group to evaluate and analyse the data together.

During the fieldwork, however, I was able to break down the barrier between academics and "objects of study" and create space for "democratic thinking": At the university Unifesp, Universidade Federal de São Paulo in Santos, I worked with Profa. Dra. Fátima Queiróz, a former physiotherapist and now a professor of social work. A few years ago, one of her students brought her into contact with the dockworkers in the port of Santos. Since then, instead of studying "them", she has been developing a joint research plan with a growing group of dockers. Here, they explore their working conditions, (colonial) history, economics, and the local and international politics of dock work. For over two years, they ran a weekly radio show broadcast from the university. The dockers gave interviews or were invited to the radio show dockers from other national and international ports, and academics from all disciplines working on docks and logistics. Their work culminated in various joint publications and blog articles. In 2018, they organised an international conference on dock labour, where two-thirds of the over 100 participants were dockers from different Brazilian ports and different Latin American and European countries, and only a third were academics. Both sides presented theoretical and empirical findings and exchanged ideas in a non-hierarchical way. In this way, they worked in the manner of Fleck's "democratic thinking". Today, many of these dockers still exchange views via Whatsapp, Facebook, and Twitter or write their blogs and articles.

To a lesser extent, this is also the case in the aviation sector. I was invited to join several airport workers' Facebook pages and to follow activists and analysts on Twitter. I also received WhatsApp group messages about their daily reflections on labour disputes or national politics. Some aviation workers studied sociology or political science to find words and research designs to reflect and change their working conditions and struggles.

Indeed, my future research design aims to conceptualise it in a much more inclusive, collaborative, and democratic way. However, this was not possible for this thesis due to time and resource constraints.

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for democratic science as a struggle for a democratic society, the remnants of which are currently being dismantled.

2.5.2 Disclosing Power Structures

Critical scholars and Marxist-Feminists concentrate on the invisibility of power structures that shape and are shaped by social struggles. Since the wave of social protests in the EU and worldwide after the economic crisis of 2007/08, there has been a debate among CPE scholars about the vantage point from which to analyse invisible structures and the underlying global division of labour.[16] Scholars such as Huke et al. (2015: 726) criticise the strong top-down focus on domination by a range of critical scholars, driven by the analytical lens of hegemony and how it is reproduced. The authors argue that emancipatory scholarship needs to focus on how domination is contested, challenged, and interrupted. I would add that disruption occurs because of previous domination, and vice versa.

As described above, the dialectical method of internal relations and levels of abstraction is used to oscillate between the two points of view of disruption and domination. Struggles around chokepoints, for example, are used as a form of disruption which, moreover, can only be accessed through the dominating practices of the state apparatuses in the capitalist state and contemporary capitalist economy. This must be complemented by a historical, economic, and political analysis of how ports and airports have been shaped by labour struggles and conflicts, gender relations, and racialisation. What is often overlooked is how power structures leave their mark on workers' bodies and generate resistance.

The quality criterion of *making power struggles visible,* therefore, requires illuminating oppressive and hegemonic practices while at the same time looking at ruptures and developing a vision for progressive social processes without denying the obvious obstacles within capitalism, such as patriarchy, white supremacy, and exploitation.

2.5.3 Reflexive and Activist Fieldwork

Even with an open and reflexive way of thinking, translating this into fieldwork and back onto paper is still a challenge.

First, there is the need to avoid extractivist fieldwork, which can take many forms: a) to deny that information only develops in a particular context, time and space; b) to deny the power relations in interview situations; c) to deny the influence of scholars on their field and the likelihood of harm to the groups being researched; d) to collect only statements that already fit a pre-formulated theory; e) to "hit the ground running" with material and interviews without giving the groups being researched anything in return.

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16   For a broader overview of theoretical trends in IPE in the analysis of global division of labour, see Scherrer (2023).

There are different degrees of distance between the researcher and the phenomena being researched. As far as positivist science is concerned, researchers try to create a quasi-laboratory situation. This point has already been critically discussed above. However, there is also a growing critical assessment of the opposite camp of this approach, "participatory research" (Hamm 2013: 57-58). It includes the democratic claim to expand science and to develop analyses with the "researched groups" by breaking down hierarchies, as described in section 2.5.1. In recent years, however, this concept has shifted towards economisation: The "objects of research", such as clients and citizens, are turning into voluntary data supply mines. Their knowledge is used in private and public services, social media platforms, product design, health and life insurance, and more. In a nutshell: The democratic aspiration for critical social science to be open and accessible to all by removing hierarchies has to some extent been commodified or used for state purposes (ibid. 55).

With these discourses in mind, I reflect in this section on attempts to avoid various pitfalls by addressing the following five points: a) self-location; b) power relations in the field; c) respondent effect and silencing; d) contextual effects; e) ethics and harm avoidance.

Scholars using activist and reflexive fieldwork cannot escape certain extractivist behaviours or thinking, but there are ways to reduce them.

a) Self-Location
Reflecting on my role as a researcher in the field, I encountered many themes that influenced the focus chosen for this thesis. Here, I offer an activist self-location that has shaped my research process and fieldwork.

I was what Enslin (1994: 553) called "politically accountable" for most of my time in Portugal and Brazil. However, whenever I ask myself whether I could have returned enough of my resources to activists and other informants, whether I could have been sufficiently "politically accountable", the answer is no, not at all. As Enslin (ibid.) describes, it is a complicated and messy decision about where to do political work and link it to academic research.

While in Portugal I chose the spaces and groups of activisms, in Brazil, I was rather thrown into specific contexts and debates. Both were meaningful experiences and allowed me to give something back to the activists I researched with and about. I learnt Portuguese at university and have been visiting the country regularly since 2010. I actively supported picket lines during general strikes, mobilisations, and placarding for demonstrations that later turned into mass demonstrations of several hundred thousand people in different cities between 2010 and 2013. During this period, I also met the president of the dockers' union in Lisbon and participated as an observer in their often (very noisy) demonstration blocks. I also became involved with people working in the Portuguese aviation industry, and through Portuguese dockers and aviation workers, I came into contact with Brazilian dockers, trade union activists, and academics.

In Brazil, I lived and worked alongside active socialists and teachers and supported a recent teachers' strike by distributing leaflets and facilitating international solidarity campaigns. I also participated in feminist caucuses in Rio de Janeiro, Santos, and São Paulo. Since my arrival, I have been asked to participate in political meetings of PSOL, teachers' unions, and other left fronts and organisations. I was encouraged to talk about my research on logistics, ports and airports, my views on the political and economic situation in Europe, how ports work in Europe, the far right in Germany, feminism in Europe, Brexit, and capitalism versus socialism. Some left-wing dockers who do lashing or work on Petrobras oil platforms and airport workers also attended these meetings, challenging my positions and questioning my views. They acted as "gatekeepers"[17] to their less politically active colleagues. I attended one of the dockworkers' strike demonstrations in the port of Santos and one of their general staff meetings, which I was also allowed to record. I was invited to speak at the port workers' conference in April 2018, and later went on a tour of the port workers' training centre with other scholars. We tried lashing and crane operation (although the last one was only a simulation). We took a sightseeing tour from the waterfront through the port of Santos.

I also visited the inland airport at Santos-Dumont in Rio de Janeiro. I was invited to family dinners and leisure activities with families of dockers and airport workers. They shared with me their housing, health and safety, care, and education problems, and I commuted with them between work and home.

It is a deliberate choice to do participatory and activist fieldwork. It opens up wider access to informants and contexts. It also means a lot of extra work, which can never be enough to quell the sense of regret at not giving enough back for the countless moments and information.

b) *Power Relations in the Field*

As well as interviewing activists who I consider to be friends, peers, or like-minded people, I also interviewed other academics and trade union officials whom I did not know beforehand and whom I would only meet once during the interview. This kind of interview situation involves a very different dynamic. As a white, working-class, female East German scholar, I encounter interactions ranging from open and friendly atmospheres, helpful responses, and invitations to conferences, to covert and overt forms of sexism or other forms of hostility. At the same time, these are what Burawoy (1998: 12) calls power effects related to domination. Roger Pierce (2008: 9-10) insists that power relations in an interview situation always favour the interviewer because they know the underlying research agenda and can control the situation. In

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17 Miro Griffiths (2019: 87) refers to the term "gatekeepers" in social movement studies "as facilitators who grant access to respondents and endorses the research objectives". He also stresses the "significance of power relations between gatekeepers and the researcher" and the necessity to recognize "gatekeepers as social actors who participated and influenced the dynamic process of gaining access to respondents".

contrast, I have found that the reproduction of power relations is sometimes not decided in advance and depends very much on different factors. Such factors can include the location of the meeting (interviewee's office, café, e.g., a relatively neutral space; workplace, etc.), the difference in age, gender, racialisation, and professional position.

Some expert interviews with female industrial relations researchers were very supportive and positive experiences. In contrast, I found some interviews with male researchers, who could come across as paternalistic, to be tense. However, other informants with the same characteristics were very open and interested in answering questions. The same applies to gatekeepers: Some incredibly supportive activists put me in touch with other workers and trade unionists. However, I also encountered gatekeepers who made me feel very uncomfortable by making sexist jokes and/or trying to control my access to the field. Notably, most of the interview and fieldwork situations were guided by a mutual interest in finding answers and explanations to the current conjunctures. It is important to be aware of power effects (which cannot be avoided), but not to be too cautious or worried in advance. This could have a negative impact on the fieldwork or lead to a "fear of the field" (Schiek 2018: 50; own translation [AE]).[18]

c) Respondent Effects and Silencing

In addition to the domination effect, I also encountered what Burawoy (1998: 12) calls the "respondent effects". When I asked port and airport workers and trade unionists about safety in the workplace, most respondents answered in terms of "security" because there is only one word in Portuguese for both security and safety: *segurança*. Their perspectives and responses have changed the whole focus of the study on the obstacles to labour struggles at chokepoints. Initially, I constructed the focus of my thesis around securitisation and surveillance. However, during the fieldwork it became clear that the risk of (fatal) accidents, precarious training and working conditions were at the heart of the concerns of workers, their families and trade union activists. For them, it is not primarily relevant what affects work, but how work affects the body. The thesis would be very different if I had insisted solely on surveillance and security. Nevertheless, being sensitive to the powerful effect of "silencing", I tried to integrate the concerns of the interviewees and broaden the focus. Ultimately, however, the silencing of some voices and views is necessary in order to construct a concise analysis linked to a particular theory. As Burawoy (1998: 23) writes:

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18   Fear of the field (German: "Angst vor dem Feld"), describes a phenomenon that often occurs when scholars conduct research in milieus or spaces that are rather foreign to them. This leads to either a very distant or overly cautious and bureaucratic approach to ethical issues, interview guidelines and behaviour towards informants and interviewees in general.

Since silencing is inevitable, we must be on the lookout for repressed or new voices to dislodge and challenge an artificially frozen configuration, and be ready to reframe our theories to include new voices, but without dissolving into a babble.

d) Context Effects

Qualitative methods in the social sciences require contact with different personalities. These are embedded in specific social structures. Interviews and observations are also linked to space and time. They depend not only on the colour of the researcher's skin, gender, or class background, but also on how long certain structures, such as trade unions, have been known, and how reflexive the interviewees are, because they are used to being interviewed or not. I visited Portugal regularly for ten years and met with various trade unions. I also went to Portugal at different times: from 2010 to 2013, when the recession led to mass protests against austerity measures; to the general elections in 2015, when the so-called "Geringonça" was elected, a minority centre-left government; to 2017 and 2019, when new struggles broke out at the port and airport, despite political changes in the government apparatus.

By comparison, I only went to Brazil once for three months and did not have as much time to get to know the structures of trade union activists as I did in Portugal. I was in Brazil between January and April 2018. During this period, several struggles against the pension reform broke out at regional and national levels. Marielle Franco, a PSOL socialist councillor in Rio de Janeiro, was murdered, sparking mass protests, particularly among femme representing Black and People of Colour in Brazil. Shortly after I left Brazil, there was a five-day lorry strike in the country; the roads were blocked, and the petrol workers (many of whom are dockers) supported the strike against the privatisation of Petrobras (Nowak 2019). At the time, no one could have imagined that a right-wing populist like Jair Bolsonaro would enter the scene and become president of Brazil. If I interviewed the same sample of informants today, the answers and perspectives would be very different from two years ago. It is crucial to keep the context effects in mind when evaluating the material and linking it back to the fluid theoretical analysis.

e) Ethics and Harm-Avoidance

In terms of ethical standards, I sought to avoid any risk or harm to interviewees and activists. Firstly, and this goes without saying, informed consent for recording was obtained prior to the interviews (Griffiths 2019: 95). This includes making the content of the dissertation transparent and protecting the right to personal privacy (Hopf 2015: 592). Secondly, the recording was stopped whenever the interviewee wanted to say something but was anxious not to make the information public. Such moments occurred when informants talked about situations over four decades ago. This behaviour relates to the main harm that interviews can cause, which is psychological pain (Pierce 2008: 10). Mainly because, as Marxist-Feminists, we are interested in embedding our research in historical processes, and we ask about the past. But the history of

transport labour is often marked by violence. There was hardly an informant who did not talk about a physically harmful event. Interviews can have a re-traumatising effect. It is important to take time, to pause, to slow down, to breathe and to avoid pressing for a quick answer. We need to be aware that our "asking about" is to some extent risky, although it can also have some cathartic and empowering effects for the informant to re-think and re-discuss experiences (Bogner et al. 2014b: 87). I have not found a good guide to dealing with such re-traumatising interviews, other than taking time and pausing, but I am happy to receive ideas and material on this for future research.

Social, physical and financial harms relate to how the study deals with the anonymity of the interviewee (Pierce 2008: 10). Therefore, I decided to refrain from using names and positions and to guarantee "formal anonymity" (Bogner et al. 2014b: 89).[19] When quoting respondents, I will use numbers and the country abbreviation. For example, Portugal is P01, P02; Brazil is B39, B40, etc. There is also recorded material from the United Kingdom (UK) and Germany (G). When workers interrupted the interview for various reasons, I had several recorded lines that I transcribed using MaxQDA. For the different parts, I use, for example, this style of writing: P01_1 2018. For the positions in the interviews or in the notes that I took when I was not allowed to record, I use, for example, item 3 or item 4. In total, the sources of the interviews will look like this, for example, P01_1 2019: item 5.

I am the only person who knows who said what and in which context. To portray my sample's organisations, cities, states, ages, and gender, I will list interviewees in an anonymised table in the Appendix 1. Despite formal anonymity, the table delivers the essential transparency of the sample.

2.6 Survey, Sample, and Evaluation of Material

In this study, I ask how and why conflicts arose and seek to identify organisations and people at the centre of specific social processes (Janelidze 2023: 60). I want to understand how workers interpret situations and what consequences they draw individually and especially collectively. Therefore, the study follows a qualitative and interpretative method based on four forms of data.

First, I conducted 68 semi-structured interviews. The sample includes unionised and non-unionised port and airport workers from Portugal and Brazil,

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19 Bogner et al. (2014b: 89) distinguish between formal, factual and absolute anonymity. De facto and absolute anonymity require that data about the interviewee be altered in such a way that no link can be traced back to a particular person. I considered this, but decided that the number of interviews conducted and the omission of names or positions sufficiently protected interviewees and their quotes from being linked or traced back.

as well as international trade union officials from the ITF and IDC. It also involves interviews with academics researching port and airport labour in the two countries. Finally, I spoke to activists who supported and participated in the activities of workers at the chokepoints.

Secondly, I used participatory observation during port workers' strike demonstrations in Lisbon/Portugal and Santos/Brazil and during workers' conferences or everyday activities such as commuting. I visited three airports (LIS/Portugal, SDU/Brazil) and five ports (Lisbon/Portugal, Sines/Portugal, Setúbal/Portugal, Santos/Brazil, Rio de Janeiro/Brazil) to gather information about the spaces of the chokepoints where work and reproduction take place. These two forms of research, e.g., interviews and observations, complement each other. While interviews generate verbal data, participatory observations allow for the collection of non-verbal information about facial expressions, gestures, sounds, smells, spaces, clothing, and settings (Thierbach/Petschick 2019: 1165). I also use participatory observation because, as Clark et al. (2009: 346) pointed out, it satisfies

… [P]redominantly post-positivist desires to question and challenge the principles and practices of research. They have also emerged amidst calls for a more socially relevant research agenda that better enables traditional "research subjects" to bring their own "voices" to the research process…

Thirdly, I took and collected photographs, manuals, leaflets, and reports. I visited two archives to look for historical evidence of demands for transport labour and the impact on bodies and struggles. I spent two days each at AMORJ (Archivo de Memória Operária do Rio de Janeiro) and at the archive of the Peoples' History Museum in Manchester. The interviews and observations were supplemented by bulletins, training programmes, and newspaper articles on transport workers and their unions. In addition, some informants allowed me to use their private archive material, such as books, charts, poems, and photographs.

Fourth, I have used legal texts, such as labour laws in Brazil and Portugal, specific port and aviation laws, and strike laws, to visualise the condensed power relations in state apparatuses over time. I also use a range of quantitative data, for example, from the official websites of the Portuguese and Brazilian Ministries of Transport, UNCDAT, and the World Bank. In addition, I use specific qualitative and quantitative studies on injuries and labour impacts in the port and airport sectors.

2.6.1 Qualitative Semi-Structured Interviews

The 68 semi-structured expert interviews were conducted between 2017 and 2019. In addition, I added two more interviews from Portugal, conducted during my fieldwork for my MA thesis in 2015, as they fit the sample. In total,

32 are from Portugal, 30 from Brazil, and five from the UK, where I was able to speak to international representatives of either the ITF or the IDC. One interview was conducted with a dockworker in Germany. With the exception of nine interviews, where the interviewees did not consent to the recording but allowed essential information to be written down, I recorded and fully transcribed all interviews. For the sampling strategy, I used "snowballing", i.e., people with certain positions and characteristics were identified, interviewed, and asked for further contacts (Berg/Lune 2017: 39). I also used my position as a participatory activist to make additional connections with possible informants.

At workers' conferences, strikes, and meetings, I collected more interviews at a time as I was quickly introduced to new workers standing nearby. These were times when snowball sampling tended to turn into a snow avalanche. Therefore, in the table of interviews in the Appendix, I sometimes have the same recording length for several people because I could not stop and start the recording. In addition, workers were happy to add points when I was talking to another colleague. This positive dynamic turned some situations into a semi-group interview without being planned.

Before starting the fieldwork in 2017, I developed a semi-structured interview guide to encourage an artificial but, therefore, thematic discussion (Helfferich 2019: 670). In this way, the discussions were distinguishable from informal conversations with the interviewees. The recordings and notes frame the data I could use for the thesis. The interview guide varies in only four ways, mainly in terms of country and sector. These interviews aim to gain "interpretive knowledge" that will help to generate theoretical concepts (Bogner et al. 2014a: 75).

In preparation for the fieldwork, I tested whether the questions in the semi-structured guide were comprehensive for a heterogeneous group. Therefore, two trade union activists from different transport sectors in different parts of Germany were asked to participate in the test study. The purpose of a pre-test is to check whether the questions posed are ambiguous or stimulate answers that are irrelevant to the topic (Weichbold 2019: 351). Therefore, after each interview, the test informants were asked what they thought about the questions and whether they understood them or saw any problems. I also checked the length of the recorded interviews to see if they were too short or too long. Finally, the order of the questions was rearranged and the wording was changed to avoid a too-confrontational start. One of the former test interviews from Germany became part of the sample, as it provides information on transnational developments in the port sector in Europe.

2.6.2 Reflexions on the Interview Sample

Since the thesis involves an analysis of the labouring body and gendered and racialised spaces, it requires a categorisation of the gender and ethical backgrounds of the interviewees. However, white supremacy and patriarchal norms such as heteronormativity are both important markers in the capitalist (post)colonial world that unfolded in the Portuguese imperial expansions. The effects of colonialism, capitalist exploitation and extraction, and white supremacy have left their mark not only on the Brazilian population (Khalema 2020: 1), but also on black and non-black Portuguese citizens. One question I was asked twice was: "I have white skin, but my father is black. I do not consider myself white, where do I fit in?" How can a sample be described without othering and reproducing racialised patterns?

I decided to address the white gaze (Pailey 2020) and the "white background of academia" (Johnson 2020) by categorising Black, White, and non-Black interviews. In this way, the narratives of Black and Brown people are highlighted, and I may do more justice to the interviewees from a multi-ethical background who struggled to be placed in the "white box". Fifteen interviewees were black, 22 were non-black, and 30 were white.

In addition, one respondent asked, "I am a trans* man. How will you describe me in your thesis?" The categories of diverse, cis-female and cis-male were chosen to tackle gender heteronormativity. Seven of the 68 informants in the sample are diverse, twelve are cis-female, and 49 are cis-male. Although I have attempted to balance the gendered perspectives on work, I have predominantly cis-male interviewees in the sample, which limits the knowledge production of my study and is only partly related to the fact that the majority in the sectors of work I have researched are socialised as male.

The role of gender and race in Brazil and Portugal will be discussed in chapters five and six, focusing on the division of labour, segregation, and racialised and gendered exploitation patterns. This will include reflections on the fluidity of gender and race in relation to class and their spatio-historical and spatio-corporal contexts. None of the categories I use are the final answer to a centuries-old racist and white supremacist, sexist and patriarchal power struggle (Caldwell 2001). However, as noted above in the section on quality criteria, it is an attempt to problematise conflicting categories and distinctions.

In addition, I conducted 44 interviews from the port sector and only 18 interviews from the airport sector, and in six interviews we discussed both sectors, mostly when talking to academics in the field. In order to achieve representativeness and data saturation (Berg/Lune 2017: 39), I tried to balance this asymmetry with archival, conference and newspaper material from the aviation industry. I ended the process of conducting when I reached so-called "saturation", for example, when certain patterns and information recurred and no new aspects emerged (Janelidze 2023: 63). The additional material was part of the

qualitative content analysis. The collection will allow me to make an overall embedded and relational comparison as described in section 2.3 above.

2.6.3 Content Analysis, Coding and Retroduction

The final section of the chapter discusses the evaluation process and how the data and information collected during the fieldwork were evaluated. The units of analysis chosen were mainly interviews, but also archival material, economic charts and photographs collected or taken during the fieldwork. As the form of the data varies, the sample includes a wide range of words, sentences, paragraphs, numbers and images used in the coding process (Berg/Lune 2017: 188).

I use the material to generate theoretical hypotheses. Due to the amount of material, I used the data analysis programme MaxQDA to analyse it. As a first step, I sorted all the material into categories that have been used in previous studies to analyse social movements and social struggles. These are institutional dynamics, environmental dynamics, cognitive dynamics and associational dynamics (Engelhardt 2017a; Engelhardt/Moore 2017). In addition, keywords were developed from the material, such as worker characteristics, social media use, and health and safety concerns. These were later integrated into the theoretical framework to analyse the struggles and processes that emerge around the chokepoints (Bogner et al. 2014a: 73).

In the second step, I rewrote the codes and re-examined the material with a computer-assisted search for identical or contradictory statements and interpretations (Bogner et al. 2014a: 78). For example, informants mentioned specific legislation that played a role in the liberalisation of the shipping and aviation industries that I was not aware of prior to the fieldwork. I coded unexpected or new information and then reassigned the codes to categories. After counting the data for each code, I checked the relevance of codes with few entries. Codes were removed or merged with others if the data did not contain critical analytical observations or analysis. I then condensed the quotations by removing superfluous expressions or repetitions. The final step was to compare the quotations. I arranged them according to the theoretical patterns of logistics, body, and state (Berg/Lune 2017: 184). I also use a fourth category, struggle, which is the lens through which all the other theoretical considerations are informed; it runs horizontally to the three main categories.

My data collection and evaluation followed a retroductive method, which, according to Norman Blaikie and Jan Priest (2019: 22), "proposes causal mechanisms or structures and seeks to establish their existence". I started with theoretical considerations and concepts of work at chokepoints (magic bullet vs. hyper-surveillance). I tried to build a theoretical framework around these two concepts deriving from the state of the art on logistics. However, during the

fieldwork, I was open to the data, and according to the quality criteria of my research, which includes a sensitivity to "silencing", I realised that the issues raised by the workers around their work and activism at chokepoints contained an urgency given the lack of health security. Thus, I re-entered the theoretical approaches from a new angle and developed new categories that aligned with my fieldwork findings more than the already established state of the art. Thus, the retrospective method describes a spiral movement, starting with theory, moving to data, and back to (other) theory, in order to have a much sharper tool to deepen further fieldwork.

2.7 Concluding Points on Methodology

According to David Marsh and Paul Furlong (2008: 17), ontology is "a skin, not a sweater". It encompasses fundamental beliefs and cannot be shed or changed with the seasons. Therefore, I have introduced a political ontology based on Hay's ontological structuralism and Ollman's internal relations. In addition, the thesis applies Havemann's and Hart's non-dogmatic perception of dialectical materialism to construct general perspectives of Marxist-Feminist theory. The vantage points are firstly spatio-historical, secondly spatio-corporal, thirdly real abstraction, and finally levels of abstraction to construct epistemological concepts. The spatio-historical standpoint takes into account historical and geographical concerns regarding the expansion of capital accumulation, which is linked to the crucial changes and transformations of the transport sector. The spatial-corporeal perspective considers materialist feminist perspectives on the production and reproduction of bodies in gendered and racialised spaces. Real abstraction describes categories that create repetitive social, economic, and political processes and are, therefore, concepts that define and create reality. Finally, levels of abstraction circumscribe the abstract dialectical application of how to cut into reality and embed phenomena in its web of contradictory and conflicting internal relations.

Incorporated and relational comparison was introduced as a research design, as opposed to close case building, Mill's comparative methods, and comprehensive comparisons. Furthermore, the air and port sectors were outlined for an incorporated and relational comparison between Portugal and Brazil. These include the general economic analysis of the logistical transformation, the role of the capitalist state and processes of Authoritarian Neoliberalism, and the impact of both on workers' labouring bodies, their regimes of reproduction, and forms of resistance and struggle.

To develop a research plan, I sought to define Marxist-feminist quality criteria linked to ontological and epistemological considerations. Here, I gathered ideas about reflexive and democratic thinking, exposing power structures, and

reflexive and activist fieldwork. Obstacles and problems in academic practices and in the field were discussed and challenged.

The final section of the chapter reviewed the research design in terms of the creation of the interview sample and the categorisation of the sample material. Finally, the evaluation process and the material to be analysed have been described as a retroductive method.

Throughout this chapter, I emphasise the link between ontology and reflexivity. To speak with Charlotte A. Davies (1999: 3):

If reflexivity is an issue for these most objective of sciences, then clearly it is of central importance for social research, where the connection between researcher and research setting – the social world – is clearly much closer and where the nature of research objects – as conscious and self-aware beings – make influences by the researcher and the research process on its outcome both more likely and less predictable.

Subsequently, any positivist tradition of case building and case comparison has been rejected because, from a Marxist-Feminist view,

… [T]he positivist goal of value freedom was really a disguised political position, one that supported existing power relationships, in particular patriarchal and class-based forms of oppression. Thus … social research must be politically committed. (ibid. 16)

3. Logistics – "*Go* They Must"

… [A]nd if a line were to wind its way at the feet of these, and up and down these mighty dales, it would have to be spanning valleys with stupendous viaducts, and piercing mountain-heights with enormous tunnels; miles upon miles of cutting would have to be blasted through the rock, or literally torn through clay … However great the obstacle that lay in their path, they had simply one of four courses to take–to go over it, or to go under it, or to go round it, or to go through it: **go** they must. (Williams 1876: 480; highlights in the original text)

Looking at logistics and chokepoints means zooming in from the capitalist totality to its constantly pulsating veins and its built environment. Logistics, e.g., the calculation and facilitation of transport and communication, acts as the lubricant of capital accumulation and, in short, establishes the metabolism of capital accumulation. It facilitates the "creative destruction" of spaces, bodies, and nature (Harvey 1990: 425). From a capitalist point of view, capitalist circulation must not be hindered or interrupted. Any risk of interruption must be eliminated to allow a seamless flow of commodities, e.g., raw materials, money, goods, and workers. Logistics is essential to the reproduction of capitalist society. And yet, the growing global uneven and combined interconnections of logistical networks and spaces have created vulnerabilities and chokepoints in the smooth circulation of capital.[20] In this chapter, I analyse why transport in capitalism requires a constant increase in speed and why the capitalist mode of circulation cannot eliminate chokepoints and ensure a seamless flow of capital circulation.

This chapter begins with a Marxist-Feminist definition of capitalism as a broader social totality in which logistics is embedded, interpenetrated, and lubricated by transport and communication infrastructures. Capital accumulation and logistics are shown to be internally related, enabling and contradicting each other. After giving an overview of various contemporary approaches to logistics, the chapter turns to *critical logistics* as a new academic sub-discipline of critical geography that can look behind the economic veil of logistics and de-fetishize it by highlighting its violent/military, political, and social implications. Critical logistics still lack a systematisation of the economic side of logistics; it will be supported by a categorisation of transport and communication through Marx's literature and its terms. Those are the commodity's use-value (and its relation to transport speed and distance), transport as commodity and production site, turnover time and storage, and the role of fixed and circulating capital. These terms contain a spatial and a temporal vantage point that are internally related.

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20 My aim is to look at infrastructural chokepoints within capitalism. I am aware that chokepoints in trade, warfare, and transport have played a role since the production of surplus commodities. Nevertheless, the development of certain ports, for example, began before the dominance of the capitalist mode of production.

3.1 Logistics in Capitalism

Capitalism will be defined from different disciplinary vantage points to create a more encompassing picture. First, this thesis differentiates c*apital* and *capitalism* (Bieler/Morton 2018: 88). Capitalism is defined from different disciplinary perspectives in order to provide a more comprehensive picture. Firstly, this thesis distinguishes between *capital* and *capitalism* (ibid.). As will be shown below, capital is divided into constant and variable capital, commodities and money, turnover times and spaces. It is a process that requires a particular set of laws, norms, and crystallised power relations to maintain its metabolism. The set that keeps the process in motion is a social whole defined as capitalism. It is the organised form of the dominant economic mode of production, based on "private ownership of the means of production and "free" wage labour" (ibid.), which allows capital to overcome all kinds of obstacles to reproduce itself. Capitalism creates and necessitates competition between owners of capital, rapid technological advances, expansion of markets, and political and social struggles (Barker 2008: 2). The definition of capitalism as the dominant mode of economic production indirectly implies that other (non-capitalist) modes of production exist historically in parallel with, and not only prior to, capitalism. Capitalism renews and builds on different modes of production and other power relations (patriarchy, white supremacy) that partly support, shape, and constitute capitalist power relations (Anievas/Nişancıoğlu 2015: 8-9).

Feminist scholars of Social Reproduction Theory (SRT) emphasise that capitalism unites two processes: the accumulation of capital, including the production and realisation of value through the circulation of capital, and the reproduction of the receptacles of variable capital, that means the labouring bodies of workers (Bhattacharya/Ferguson 2018). These two processes are structured by patriarchal/sexist forms of power relations, which underpin the "normal" exploitation of workers for the capitalist mode of production. Another example is slavery. Scholars of colonial history reveal how slavery played a different role in medieval Europe than it did on plantations in the Americas (Blackburn 1997: 102). In medieval Europe, enslaved people, regardless of colour, were used for manual and domestic labour, including transporting goods and people with their bodies (Vogt 1973b: 2). They rarely worked on farms or in mines. It was only with the advent of colonialism that work in mines and plantations became the task of predominantly black and Amerindian enslaved people, transforming slavery into a racialised form of exploitation with the emergence of mercantile and agrarian capitalism in Europe (Blackburn 1997: 67). The racialised division of labour between enslaved and "free" labour in Europe was a crucial feature of the emergence of the capitalist mode of production. Cheap labour on American plantations was

the resource for producing cheap food for European workers, keeping their wages low (Patel/Moore 2018: 143-144). The re/formation of race and gender, along with the emergence of the working class, is inscribed in the roots of capitalism and has implications for gendered and racialised divisions of labour to this day (Orzeck 2007: 501-503). It permeates the way resistance has been and is organised, and how workers have been divided along their bodies on the one hand, but have also sought to fraternise and organise together on the other.

From a historical materialist level of abstraction, class struggle is the starting point for capital accumulation. Therefore, the emergence of capitalist societies in Europe and other parts of the world cannot be understood as purely economic. It required the "double freedom" of workers and the subsequent ideologies of punctuality, rationality, and industriousness, which were inscribed in workers' bodies with the support of authoritarian capitalist state structures and the churches and have been challenged by workers ever since (Holloway/Thompson 2007). Silvia Federici (2014: 21-22) argues that "capitalism was the response of feudal lords, patrician merchants, bishops and popes to a centuries-long social conflict". In sum, this system arose as a

… [C]ounter-revolution that destroyed the possibilities that had emerged from the anti-feudal struggle – possibilities which, if realised, might have spared us the immense destruction of lives and the natural environment that has marked the advance of capitalist relations worldwide (Federici 2014: 21–22).

From an ecological perspective, Patel and Moore (2018: 163) emphasise that the political and economic technologies used to exploit people and nature in Europe and the colonies led to a "metabolic rift". In this analysis, they frame the current historical period as "capitalogenic" (ibid. 163). The metabolic rift developed in part before the emergence of capitalism and might have been even a driver of it, as will be discussed in the following chapters. Logistics, transport networks, and constant technological development have played their part in colonialist trade networks, "primitive" and capital accumulation, and the destruction of nature.

Unlike money, the state, class, reproduction and struggle, transport and logistics have rarely appeared in Marxist-Feminist textbooks, or only as technical footnotes. However, like the other concepts, both circumscribe a "real abstraction" as they build on internal (power) relations, describe and shape the world. Logistics and transport still differ in their level of abstraction.

The term *transportation* derives from a French origin, probably from the late 14th century, meaning to "convey from one place to another", while "trans" means "beyond" or "across" and *portare* means "to carry". Transport works with the three different aggregate states of surfaces: gas, liquid, and solid, i.e., air, water, and land. The material of the first roads was not only earth or stone, but often water: These natural "roads" did not have to be built, but were already "given by nature", connecting, like rivers, for example, the sea with the interior of the land (Fayle 1933: 25). While there are natural pathways that allow trans-

porting, there are also natural obstacles to it: mountain chains (high relief intensity), deserts, moors, jungles etc. (Marshall 2016). To develop transport infrastructures became more expansive, the more goods and people were transported, the longer the distances grew. More capital was invested not just to push spatial but also physical frontiers of the earth's surface (Banister et al. 2009; Urry 2012; Divall et al. 2016).

Transport has always been a key factor in the development of civilisations. The need to travel, to migrate or to organise the movement of materials and goods to and from distant places requires planning and calculation, e.g., logistics, in order to get something from A to B. Transport is a very concrete level of abstraction, but is embedded in a wider infrastructural and institutional setting which allows organising and planning of moving goods and people. That is why in this book, I focus predominantly on the term *logistics* and how it is historically and geographically embedded and reproduced through physical labour. The term "logistics" is derived from military studies and warfare, with the exception of chokepoints. Logistics is defined as the art of moving and organising equipment, troops, and food supply. This concept has been coined as the third art of warfare, in addition to strategy and tactics (see Roth 1999: 2). As a "real abstraction", logistics is kept in motion by a series of scientific calculations and (technocratic) theories in which logistics is fetishized. Logistics is planned, built, financed, discussed, and analysed in isolation from social power relations, the history of inherited violence against nature, and the living bodies of workers.

I have already defined fetishization in section 2.3. However, I would like to quote James Walvin (2019) to illustrate an example of fetishization. He wrote about the production and consumption of sugar and the degree of scientific calculation and yet fetishization of sugar production:

The plantation ledgers provide a blueprint for running a successful sugar plantation. There had never before been such a calculated and remorseless analysis of land and labour, and never before such an unyielding system able to extract the maximum returns from the labour force. Through all this, slaves worked not simply for the tight discipline of the sugar season – cutting and processing the cane from January to mid-summer, planting new cane and tending the fields thereafter for the next crop – but they worked under the threat of severe compulsion. … Yet who ever gave this a moment's thought, or heard the sound of the lash, when spooning sugar into their tea or coffee in London or Paris? (Walvin 2019: 46)

Today, global supply chains have become a neat, well-organised web that links factories, mines, farms, warehouses, restaurants and shops in a calculated way, drawing labour from different parts of the world. These links and connections are mediated by logistics. Echoing Walvin, we can ask today: Who has thought for a moment or heard the sound of containers breaking loose and shattering the body of a seafarer trying on a new suit or pair of shoes in London or Paris?

The fetishization of logistics can be found in many studies (see Nowak 2020 for an overview). Reflections on the "logistics/transport revolution" in

political economy, economic geography, business studies, architecture and history focus on containerisation, automation and other transformative processes and how these shape globalisation processes within contemporary capitalism. There are very detailed works on containerisation and the "logistics revolution" (Hesse/Rodrigue 2006; Levinson 2006; Notteboom/Rodrigue 2009; Bookbinder 2013; Coe 2014); on the role of port logistics in urban spaces (Vormann 2015); on transport policy in Europe (Banister et al. 2009) and Brazil (Costa et al. 2010); on the history of transport (Divall et al. 2016); and on the role of aviation and the spatial economic impact of airport construction and the emergence of low-cost airlines (Adey et al. 2007; Addie 2014; Budd et al. 2014). At the larger scale of infrastructure, there is work on extra-statecraft (Easterling 2014) and power relations in infrastructure (van Laak 2018).

These insightful studies express an overt or indirect (understandable) fascination with technological advances and changes in logistics. In general, however, several of these studies do not include the perspective of workers, their embodied experiences of transport labour combined with violence, austerity, changes in labour laws, or the struggles around them.

The "logistics/transport revolutions" that have made possible the immense increase in the speed of containers and fuel have prepared the ground for the emergence of vulnerabilities, such as chokepoints. It has been presented in many studies as a relatively new process and explainable by recent technological inventions, rather than as an internal, spatio-historically and spatio-corporally embedded dynamic within the long durée of capitalism. However, there are new approaches to these issues that beg to differ.

3.2 Critical Logistics

Authors such as Charmaine Chua, Laleh Khalili, and Martin Danyluk (2018: 617) argue for a newly coined research field of *critical logistics*, which can be located between the fields of critical political economy and human geography. They state (ibid.):

… [L]ogistics is not limited to the management of supply chains, military or corporate. Rather, it is better understood as a calculative logic and spatial practice of circulation that is at the fore of the reorganisation of capitalism and war.

Critical logistics is based on three key considerations: Firstly, it rejects the perception of logistics as an apolitical field of technical management studies and instead emphasises the power relations and military practices associated with it. Secondly, scholars in the field aim to expose the "flaws, irrationalities, and vulnerabilities of logistics regimes" (Chua et al. 2018: 617). Third, the field focuses on struggles at and within logistical infrastructures. These three

basic ideas can de-fetishize the debate on the logistics revolution. They reveal the internal relations to capital accumulation, crystallisation of spaces, state transformations, violence, and struggle.

For example, Deborah Cowen's (2010; 2014) analysis unravels how knowledge of military disciplines is integrated into *supply chain security* (SCS) as a systematic approach by governments, the military, and corporations to manage the risk of disruption from terrorist attacks, but also from labour disputes. Cowen uses the example of US security after 9/11 and an attack on a container ship. Both had a negative impact on US-related value chains as the government closed borders in response to these attacks. In the aftermath of these incidents, Cowen points out how national security and the security of international trade flows became conflated with the governance of nodal economic spaces such as ports and airports (Cowen 2014: 88). The concept of national borders has been blurred by security programmes such as the ISPS code, a protocol developed by US security firms to increase control of containers and goods entering and leaving the US space (ibid.). In 2004, the ISPS code was adopted by 152 states that trade with US-based companies and markets. It includes restrictions on workers' access to their workplaces and allows for a wider research protocol on the background of each worker, including family and friends. It can have a deregulatory effect on labour, as labour rights and activists at ports and airports are subjected to extraterritorial legislation (ibid. 115-118). In her monograph "The deadly life of logistics", Cowen also examines the colonial elements in the EU's approach to modern piracy off the Somali coast. In addition, she examines the physical effects of securitisation and automation on the bodies of workers in ports (ibid. 80; 96).

In the same tradition, Laleh Khalili (2020b) explores in "Sinews of War and Trade" the crystallised power structures in the infrastructure of shipping lines, cables, and ports on the Arabian Peninsula. Integrating the colonial and postcolonial features and traces left by different imperialisms, she exposes the current capitalist class structures around, for example, the ports of Dubai and Aden. She also explores the racialised division of labour between different nationalities and skin colours. Khalili (ibid. 192) also discusses the challenges of reproduction due to the long distances between homes and workplaces and the different traditions of unionisation and labour struggles in the ports.

These insightful works on critical logistics link technological advances with economic, political, and social processes and embed them in spatio-historical and spatio-corporal contexts. However, they share the weakness of a clearer systematisation and operationalisation of their analysis. The stories and narratives told are loosely based on Marxist theorists such as Luxemburg and Harvey, but could be enriched by linking them to theories of scale, state, body and struggle. These authors would probably agree to some extent with this criticism (Khalili 2020b: 6). However, their lively and sometimes poetic work can also be seen as an indirect critique of the overly theoretical writings in critical

political economy, which in turn often lack empirical analysis, especially in relation to the histories of workers and oppressed classes. Moreover, what critical logistics offers is a focus on logistics as a crucial feature of militarisation, warfare, and violence, which is a complementary view to the economic position of logistics in capital accumulation, which is neglected in Marxist work on transport and communications.

In this and the following chapters, I try to bring together critical logistics and its important perspective with Marx's analysis, mainly his discussion of transport in the Grundrisse and Capital Vol. 2. I also try to follow the style of critical logistics writers, which is to link theoretical ideas directly with empirical findings and narratives. Therefore, at the end of each section, I will include contemporary implications for the development of logistics in global capitalism. In the last part of the chapter, I will add some reflections on what the "logistics revolution" means for transport workers at chokepoints and their Social Reproduction Metabolism.

3.3 The "Line" between M-C-M'

According to Marx's outline of capital in the Grundrisse, capital accumulation consists of four interrelated parts: production, exchange, distribution, and consumption. In each of these four parts, capital enters into different relations and forms, such as money, commodity, variable, and constant capital. It changes between moments of fixation and fluidity (Marx [1850-1859] 1967: 11). While the form of capital changes, the perpetuity of value remains in these ephemeral figures and moments of capital circulation. Value acquires its permanence as capital by constantly revitalising itself, like a "vampyr" that "sucks in labour" to preserve its "soul" (ibid. 539; own translation [AE]).

Production, distribution, exchange, and consumption form a porous, constantly changing capitalist totality. Production is determined by the other three moments of circulation. For example, as the market widens and the sphere of exchange expands, production must increase, and this requires a deepening and an increase in the division of labour. It can only be organised by extending the chains of distribution over spatial distances (Marx [1850-1859] 1967: 20). These four interrelated parts differ in their Marxian characterisation: production is determined by general natural science; distribution is presented as an underlying social accident. Exchange is a formal social process between production and distribution, and consumption is described as a field outside the economic sphere (ibid. 11).

These parts have a social and a private/individual character and play different roles in production and circulation. *Production* refers to the physical production of goods and, as will be shown later, it also refers to the performance

of services, such as changing places to circulate goods and people (Arboleda 2020: 102). *Exchange* addresses the whole field of exchange value, money, and the circulation of capital. *Distribution* is a social category that includes how wealth and goods are distributed. However, Marx ([1850-1859] 1967: 17) also discusses the technical and spatio-temporal conditions of transport, communication, and their interrelations. The dual analysis of distribution again underlines that transport is not just a technical footnote from a Marxist-Feminist/critical logistics perspective. Rather, it is a social, political, and economic category, as the distribution of wealth and goods is contested. Finally, the *consumption* of commodities plays a role in the sphere of production, as products (steel, wood, fuel, etc.) must be consumed in order to produce new goods. In addition, private consumption is also relevant to the turnover time of capital, especially in crises of under-consumption and over-accumulation.

I will concentrate on capital accumulation from the perspective of distribution and consumption. In this way, I will analyse how and why transport networks and logistics expanded, underwent several logistical revolutions, and created and shaped chokepoints. From a Marxist-Feminist perspective, chokepoints can be seen as a consequence of the maintenance or shifting of spatio-historical differences at the level of internal socio-economic processes. Initially, the focus is on an economic level of abstraction. In this first part of the book, I will deliberately follow a tendency to fetishize and economise transport. In the following chapters, however, I will discuss the political and social roots and implications of logistical transformations.

In the following sections, I foreground the use value of the commodity, transport as commodity and site of production, turnover time and storage, and the role of fixed and circulating capital in transport. I find these real abstractions useful to systematise different socio-economic processes and spatial and temporal perspectives in order to gain a deeper understanding of the role of logistics and distribution within capitalism.

3.4 The Commodity and its Use-Value

The discussion of the development of distribution within the capitalist economy must begin with the use value of commodities. All commodities are characterised by their individual use-value and, as such, form the basis for the equalising and unifying quality of exchange-value. However, the use-value can only be maintained for a certain period of time, which results directly from the characteristics of the product:

I) Time-sensitivity: Perishable goods, for example, could not be integrated into the global circulation of capital for a long time because their utility vanishes if they are not consumed after a short time (Marx [1885] 1971: 130).

Thus, for example, the spoilage of food constitutes the absolute limit for the circulation time of perishable goods. Marx emphasises that perishable goods could only be exchanged in markets close to transport hubs or places of production. Mark Levinson (2006: 48) emphasises the role of the invention of the refrigerated wagon in the 1880s in the USA: It made it possible to produce meat on a mass scale and thus "made meat affordable to the average household by allowing meat companies to ship carcasses rather than live animals across the country". Before this invention, however, various spices were used and traded to extend the useful life of meat and fish.[21] The increased utility of food also allowed for longer voyages by ship to reach new lands and markets. This is one of the reasons why, along with gold, "spices were always in high demand in the 15th and 16th centuries" and were part of the Portuguese and Spanish colonialists' main trading stocks (Fausto/Fausto 2014: 4-5).[22]

II) Spatial sensitivity: Use value can disappear due to seasonal changes: Winter clothes have no use value in summer and, therefore, no exchange value. However, depending on today's transport costs, they could be produced in summer regions (with low labour costs) and transported to a country with cold winters. In addition to changing climatic conditions, cultural events define periods of use value: Christmas, Easter, Halloween, and other religious and cultural traditions create a market for goods that is limited to a specific period. However, certain goods can only be produced in specific regions with specific soil and climate conditions. In addition, the mass production of certain commodities, especially wheat, soybeans, timber, etc., depends on large spatial units. For example, while European states in the Middle Ages could produce wheat and grain to reproduce a feudal system, the large spatial units in the colonies of Africa and South America allowed the mass production of sugar, coffee, tobacco, and now wheat and soya for a capitalist market. The global interconnectedness of production and transport networks attempts to overcome the temporal and spatial barriers imposed by the spatial use-value of commodities. Thus, the production of time-sensitive and space-sensitive commodities can be combined.

III) Market sensitivity: Competition between different capitalists based on "whoever sells first" requires access to logistics capable of bringing the same use-value commodity to market more quickly and therefore more cheaply than the competing firm (Marx [1885] 1971: 252). Because of market saturation, a logistical blockade can affect time- and space-sensitive commodities. Perishable goods may gradually spoil or lose their use value and have to be sold at a lower price; commodities may become out-of-date if put into involuntary storage (ibid. 147-148). Goods, such as the supply of components for electronic

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21 Salt could extend the time before food began to rot, but other spices, such as chilli, allowed the body to digest different types of protein.

22 For a brief period, the Portuguese Empire monopolised the supply of spices to Europe by controlling the East Asian trade routes (O'Flanagan 2011: 31).

devices and clothing, are therefore again intertwined with time-sensitive trade, which is more subjected to the risk management of global logistics operators than goods that have a longer time before their use-value becomes outdated.

Although the exchange value of a commodity is central to capital accumulation, its use value and characteristics determine and even constitute a whole set of technologies and logistical needs to bring it to market and enable its commodification. Products have to be transported. They have to change location and overcome spatial distances in order to become commodities and realise their exchange value. Lubricating and speeding up the turnover time of commodity capital is therefore the aim of every transport revolution; because **go** – they must.

As capitalism is built on competition, transport companies are also trying to use their crucial position between manufacturing and retailing to become "global supply chain masters" themselves.

3.5 Transport as Commodity and Production Site

Over the course of the twentieth century, a reversal of sorts took place, and logistics began to lead strategy, rather than serve it. (Cowen 2014: 3)

In the second volume of Capital, Marx discusses production time in terms of labour and how it is used to produce services. There are non-commodifiable tasks, such as the work of capitalists (signing contracts, etc.). Conversely, some services are commodifiable even though they do not produce a physical thing (Marx [1885] 1971: 60-61). One such service is provided by the transport industry. The commodity it sells is the change of location itself (ibid.). Transport is a commodity that is consumed as goods and customers move from one place to another. Therefore, transport is produced and consumed at the same time. A change in location can be consumed within the production cycle as machinery, raw materials, and fuel have to be transported to production sites. The transport of people for private journeys, holidays, shopping, visits, etc. takes place exclusively within the realm of distribution and consumption, separate from the production cycle, although the transport itself is produced and consumed at the same time.

The exchange value of transport, like any other commodity, is determined by the means of production needed to produce it and the surplus value created by the investment in variable capital: the labouring body of the workers (Marx [1885] 1971: 60-61).

Most goods can only be used once they have been transported to the customer, so in most cases, the use value of a good is intrinsically linked to transport. The product travels from the place(s) of production to the market and is ready for consumption when its circulation is complete. Because

transport and commodities are internally linked, Marx argues that the transport sector adds value to commodities by transporting them (Marx [1885] 1971: 150-152). Similar to the production cycle of the commodity, this added value is divided into labour and surplus value (ibid.). Marx argues that without circulation, the product could not be transformed into a commodity and consumed. It is, therefore, entirely dependent on transport and logistics.

Furthermore, without the massive volume and speed at which logistics companies can circulate goods, capitalists would not be able to re/invest and accumulate capital on the scale we see today (Marx [1885] 1971: 153). Moreover, as discussed above in relation to the characteristics of commodities, the use value of a large number of products only remains if they are consumed in a given period of time. Logistics is, therefore, an intrinsic and indispensable part of capital accumulation.

As long as commodities, resources, and variable capital are in transit to the factory, the market, or the workplace, they cannot serve as a means of production. Products and labour appear as objects within the transport sector (Marx [1885] 1971: 254). Transport logistics is then not just an appendage of manufacturing and retailing. Transport itself is a production and trade sector in its own right, enabling others to be connected. By producing, selling, and consuming the commodity of location change, transport logistics has a dual character as a means of production and consumption.

3.5.1 Between Economy's Appendix and (Renewed) Supply Chain Master

Recent (critical) logistics studies highlight the new role of the logistics sector as a potential global supply chain master. This potential role is attributed to a particular transformation in manufacturing, which has been adapted by the retail sector and, along the way, by some transport companies.

In this narrative, the transformation of transport logistics has been impossible without the global outsourcing of production to the global South and vice versa. According to Bonacich (2009: 360), there has been a paradigm shift "from push to pull production". The end of the global value chain has become its starting point: (retail) trading companies, which were subordinate to manufacturers in the post-war period, are no longer required to distribute and sell a product at a given time ("push"), but vice versa: "retailers [determine] what will be produced, when and where it will be delivered, and all the details of bar coding and packaging" ("pull") (ibid. 44).[23] This process is a consequence of

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23   The process of reversing the value chain from push to pull is not a new historical development. David McNally (2020: 25-26) shows how such transformations were already developing in the ancient Greek economy; foreign merchants dictated prices and lowered costs. However, this was happening in a society whose market relations with places of

another important paradigm shift, from "just-in-case" to "just-in-time" (Bensman/Jaffee 2016: 62). Just-in-case involves the storage of the goods described above and their delivery to the market, using storage as insurance against disruptions and crises. Just-in-time or JIT was first used on a large scale in the 1970s by the Japanese car company Toyota, which outsourced the production of components to various suppliers (Levinson 2006: 265). As real estate is extremely expensive in Japan, storage had to be eliminated to reduce costs. JIT allows costs to be driven down as small suppliers compete with large companies for longer-term contracts. It also puts pressure on suppliers to produce and deliver on demand. The risk of overproduction and underconsumption crises cascades down to the suppliers, who are the first to be affected. This process allows the core cooperation to remain relatively flexible in its operations during crises.

The retail industry has adapted the system of outsourcing components to the global South. Deindustrialisation, mainly in the global North, has meant the destruction of a certain type of industry, production, and labour, and the shift of economic power from manufacturing to retail. According to Sabrina Apicella (2016: 9), this shift became relevant in the 1990s, starting with the development of the retail industry in the US, particularly Wal-Mart. The company replaced the oil, banking, and automotive industries in the top ten of the world's most valuable companies. Today, large retailers not only control distribution chains, but also determine and control working conditions and wages in production and logistics networks in the global North and South (Bonacich/Wilson 2005: 70; Ikeler 2011: 378; Apicella 2016: 10). By implementing and improving the technological, economic, social and political processes imposed by Wal-Mart, Amazon has pushed the paradigm shift further towards the person-to-person model (Banister et al. 2009: 16). The company seeks to integrate all four parts of its value chain: Production, exchange, distribution and consumption of goods.

Nowak (2020: 6) critically notes that this narrative of the logistics revolution and the shift from push to pull tends to focus solely on consumer goods and cannot be generalised to all production sectors. Except for Khalili (2020b), who focuses primarily on oil transportation, most logistics scholars overstate and oversimplify the transformation of global logistics with a (Euro-Anglo-centric) focus on the role of Wal-Mart and Amazon. Therefore, I only partially agree with this specific consumer goods-oriented transformation, mainly because the numbers of what is transported and how tell a different story. In 2019, more than two-thirds of ocean shipping capacity were taken up by dry cargo, mainly iron ore, coal and cereals such as wheat and soya (UNCTAD 2020: 13). At the same time, container ships alone account for 13 per cent of the world's shipping fleet (ibid. 37). This sector has grown dramatically between 1980 and

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production were very specific, but lacked the capitalist element of mass accumulation of goods.

2019, with what has been described in the past as hyper-globalisation. However, in the statistics for newly built ships, only 16 per cent were container ships in 2019, while around 64.7 per cent were oil tankers and bulk carriers (ibid. 36).

In general, logistics and transport companies are competing with manufacturing and retailing companies to become "supply chain masters" (Plehwe 2001: 59). Following the narrative of the logistics revolution and containerisation, Plehwe (ibid. 58-59) notes that an economic focus on "distribution" has developed due to the relocation of low-tech industries to structurally weaker regions. Eva Senghaas-Knobloch (2008: 31-34) writes that a new type of rump company emerged during the JIT transformation. Its core business is limited to marketing its label (and high-tech processes), while the "flexible needs" of the market are met by decentralised networks of independent firms. As a result, the world of work has been transformed, not only in ports, airports, shipping, and aviation, but also in manufacturing. The new way of working and the new outsourced supplier networks can be seen as a reminiscence of the 18th/19th century manufacturing system (ibid. 36), but at today's level of an integrated, globalised, and accelerated value chain. The growing distances between resource-producing areas and low-tech and high-tech industries have meant that logistics has had to emerge as a central, independent economic sector. It can now coordinate networks of raw materials, components, and finished products all the way to the point of sale. In addition, decentralised production networks require finely tuned transport networks to collect the various items and move them to new production sites where the shoe, computer, or coat is finished and connected to the market and the customer.

However, given its share in maritime transport capacity, it is unlikely that containerisation alone is responsible for this development. Martín Arboleda (2020: 101) notes that the "primary-commodity production has been the main breeding ground for innovations in maritime and ground transportation." Due to the growing distances between space- and time-sensitive primary commodities and consumer goods, especially in the Global South, and the marketplaces of the capitalist centres, as described above, the pressure to reduce transport costs can be used by large shipping companies to dictate prices.

The distribution side of the global value chain has thus evolved over the last four decades in a similar way to the retail and manufacturing sectors. On the one hand, there are large international players, mainly shipping and port companies, which since the 1980s have organised the entire door-to-door transport of a container and thus dictate the prices of container and dry freight transport to the retailer or manufacturer (Levinson 2006: 259-262; Bonacich 2009: 363).[24] On the other hand, there are smaller transport companies, includ-

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24   Edna Bonacich (2003: 43) states that as "part of deregulation, the 1984 Shipping Act permitted ocean carriers to offer a single door-to-door rate." However, the shipping

ing large freight forwarders, rail and air companies, and small (independent) truck owners who compete for long-term contracts with shippers/forwarders. It is comparable to the small suppliers in the JIT production line (Jaffee 2016: 2). The most important global shipping company is the Danish group Maersk Line, followed by the Italian-Swiss MSC and the Chinese port and shipping company COSCO Group, which recently bought terminals in the Greek port of Piraeus.[25]

However, as the period of "hyper-globalisation" is increasingly discussed as coming to an end, the trend towards more significant and even more flexible global value chains may change.

3.5.2 Regionalism and Changing Trade- and Transport Patterns

The process of globalising value chains has had its ups and downs since colonial trade. In the last four decades, it seemed to be an expanding trend. However, there is currently a momentum towards a reversal of globalisation. This trend is linked to the global economic slowdown in 2018/19 and the financial shockwaves sent through global supply chains during the outbreak of Covid-19. China has been the driver of international manufacturing, building a "global supply chain empire" (Arboleda 2020: 35). Due to tensions with China, the United States and Japan have introduced substitution and tax breaks to encourage domestic firms to produce "closer to home" (UNCTAD 2020: xi). Figures show that the potential emergence of the transport industry as a global supply chain master has become an advantage for emerging economies, not the old centres of capitalism. According to the Airport Council International (ACI), five of the ten busiest air cargo hubs and four of the busiest passenger airports in 2020 were in China, South Korea, or the United Arab Emirates.[26] For maritime trade, this is even more evident: the top ten global maritime hubs include only ports from China, Singapore, and South Korea. Asian ports account for more than 65 per cent of container throughput, with China accounting for more than 50 per cent, followed by Europe with a sole share of around 15 per cent (UNCTAD 2020: 17).[27]

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companies cannot act completely independently, as they operate on fossil fuel themselves. Hence, especially in the sector of liquid cargo such as oil and gas, energy companies have a larger power position in the battle about who controls which value chain.

25 See Alphaliner-Index, https://alphaliner.axsmarine.com/PublicTop100/ [Access: 02.01.2021].

26 See ACI (2020). World's 20 busiest Air Cargo Hubs, https://aci.aero/news/2020/05/19/ aci-reveals-top-20-airports-for-passenger-traffic-cargo-and-aircraft-movements/ [Access: 01.09.2021].

27 It is therefore not surprising that the G7 has set up a new infrastructure investment programme of 600 billion Euro, competing with the "new silk road" of China and the trend of emerging states to concentrate on transport hubs. See Tagesschau (2022): "G7 wollen

Moreover, as shown below, port companies from China, Singapore, and Turkey are outbidding regional port companies in Europe and winning concessions to buy or operate terminals in European countries such as Germany, Greece, and Portugal. This transport revolution has elevated the transport industry to a critical position of power, as it has done in countries specialising in the construction and operation of transport and infrastructure, previously known only as the sweatshops of the imperialist states of the global North. As Martín Arboleda (2020: 26) argues:

These historically unique geographies of extraction, increasingly populated by robots and scientists, have underpinned the process by which the Asian Tigers went from being mere export-processing zones immersed in "captive" positions within global supply chains to becoming industrial power houses and logistical juggernauts whose scale of industrial dynamism is without parallel history.

Tensions arising from such a change in position could lead to a shift in trade patterns, with serious implications for the global transport sector. Figures for maritime transport point to increasing regionalisation, with a large share of intra-Asian maritime trade and the development of bilateral maritime corridors "across the Asia-Middle East-Africa-America axis" (Arboleda 2020: 103). However, it remains to be seen how this will affect the maritime and aviation sectors. Patterns of "time-sensitive trade" could shift to air trade, although air freight is still much more expensive than sea freight. In 2020, there will be a spike in empty and cancelled voyages, causing financial turmoil for ports and global freight forwarders (UNCTAD 2020: 26). The supply of empty containers was constrained as containers continued to accumulate in Chinese ports but were not being shipped to other world economic centres. The shortage of transport space and capacity has become an issue and has been linked to the idea that carriers may be trying to increase freight costs by delaying transport services and artificially reducing space. This is countered by the fact that container scrapping has been postponed as demand for second-hand containers and vessels has increased (UNCTAD 2020: 40). This delay can have a devastating impact on the health and safety of dock and maritime workers. Rusty containers and prolonged ship maintenance can lead to fatal accidents.

The issues of vessel capacity and faster turnaround times are closely linked to storage, even though storage seems to contradict the seamless flow of goods.

China Konkurrenz machen" https://www.tagesschau.de/wirtschaft/weltwirtschaft/g7 -investition-infrastruktur-101.html [Access: 15.07.2022].

3.6 Turnover Time and Storage

Marx regards the circulation time of commodity capital as the sum of two parts: I) the production time in which the potential surplus value is created and II) the circulation time in which the surplus value is realised, i.e., in which the commodity is sold (Marx [1885] 1971: 124-125). The time of production includes interruptions such as breaks, night times, and times when no labour is required, such as the drying or growing processes of plants, animals, etc. (ibid.). These are periods in which no surplus value is added. Therefore, there is a constant attempt to reduce these unproductive production times and to synchronise production and actual working times (ibid.). Spatial and temporal factors are used to minimise unproductive periods. Compared to the human body, which needs to rest and reproduce more often, machines do not need to be interrupted or can now run for much longer.

A temporal and spatial strategy for dealing with "unproductive" time slots, e.g., time in which no "living labour" is added to the commodity, is to use voluntary storage to ensure that neither the production time nor the circulation time is unnecessarily prolonged. Storage provides a solution for all – "unproductive" labour time, interruptions in production, or the circulation sphere. A stock of raw materials and tools is necessary to fill production gaps caused by shortages, strikes in the supply industry, or technical failures in the logistical processes. In addition, a stock of raw materials can be put into circulation, and surplus value can be realised even when production time is interrupted (Marx [1885] 1971: 139-143; Levinson 2006: 267-268). In order to circulate capital, it is necessary to spatially concentrate commodities. Storage is a form of insurance, an essential part of (over)production to ensure a constant circulation of commodities. In addition to the storage of commodities, credit is used to ensure the flow of capital to new sectors in times of interruptions in production (Harvey 2015: 98-99).

In addition, floating storage, such as the temporary abandonment of ships and tankers at sea, is now used to create artificial shortages, mainly of crude oil (UNCTAD 2020: xii). Tankers and container ships are reactivated when prices rise. Until then, they remain at sea, sometimes with a neglected crew of seafarers. Although voluntary interruptions in the flow of goods are inconsistent with a seamless turnaround time, circulation and distribution inevitably rely on storage. It is a means of coping with crises of all kinds. Conversely, increasing the speed of transport can also reduce the need for storage.

In the sphere of distribution and consumption, crises can arise due to a growing volume of unsold products remaining in circulation. To invest all their time and energy in organising the production process (today on a global scale), the producing capitalists outsource the sale of commodities to the retail sector at a discount, allowing the retailers to access part of the surplus value. As the

retail sector organises the circulation and sale of commodities on a larger scale, it specialises in realising exchange value (Harvey 2015: 98). One of the ways in which retailers can compete is by investing less in storage than others. One way to reduce storage costs is to increase the speed of transport. The faster the journey, the lower the need for storage. If it takes two weeks to transport coal, it must be stored for at least two weeks in case of an interruption. If the journey takes only a few hours, the need for storage shrinks to a small amount. In addition, if goods can be brought to market more quickly, the turnover time of capital can increase. Conversely, if the turnover time decreases due to crises, additional capital is needed to organise storage (Marx [1885] 1971: 293).

Although the use value of a commodity loses importance in relation to the exchange value (since capitalism is based on exchange and not on need) the use value reappears vividly when a product cannot be sold due to lack of interest or market saturation (Marx [1885] 1971: 149-150). However, increases in speed, volume, timing, and risk management can reduce the risk of unsold products and increase the chances of realising the exchange value of commodities. Since storage is a costly solution to these dangers of blockages in the sphere of production and circulation, ever new technologies and forms of management have been developed to enable the seamless circulation of capital and to synchronise production time with the overall circulation of capital.

Just-In-Time and Door-To-Door

Today, new forms of supply chain management are attempting to integrate each step of production, exchange, and distribution globally, in an effort to encompass the entire value chain. Just-in-time production and door-to-door delivery aim to reduce inventory and speed up production and distribution. An essential prerequisite is the creation of a systematic wholeness of logistics networks, which is challenging given that the histories of built infrastructures are embedded in their local and national spatial conditions (Larkin 2013: 331-339; Chua et al. 2018: 619). It creates political and technical separations between the scale of railways, trucks, highways, and cranes along regions and borders (Martin 2013: 1026-1031). However, so-called containerisation, introduced by the US imperialist state from the 1960s onwards, has pushed states internationally to standardise their logistical technologies to a new degree (Levinson 2006: 227; Martin 2013, 1023-1032; Cowen 2014: 41-44). What has been described as the logistics revolution, or the fourth wave of the transport revolution, can be traced back to the standardisation of the container, the wagon without wheels that can be loaded onto trucks, ships, and trains alike (Bonacich 2003: 42-43). Keller Easterling (2014: 188) emphasises that non-governmental organisations such as the International Organisation for Standardisation (ISO) have set and thus dictated standards on a global scale. "The 1958 invention of the "corner lock" (ISO 1161:1984) fits Malcolm McLean's shipping container (ISO 6346)" (ibid.). Both have been widely introduced into global transport systems and integrated by different transport companies in order to compete

despite the new pressures for standardisation. Various authors underline that behind the standardisation of things there is a political and violent process, far from mere bureaucratic practices, often linked to strategies of accumulation supported by the machinery of war and social dispossession (Levinson 2006, 148-149; Martin 2013: 1028-1029; van Laak 2018: 25).

The introduction of ISO standards facilitated just-in-time (JIT) production on a global scale and increased the speed of transport. Before the container was widely used to transport ammunition in the Vietnam War, goods were stored in various baskets, boxes, and sacks, often moved and stored manually by a large workforce of longshoremen, porters, tallymen, and supervisors. It took several days for a ship to be unloaded. The intermodal nature of the container means that a significant volume of goods can be quickly transferred from one mode of transport to another. The loading and unloading of ships have been reduced from several days to a few hours. The consequences of the spatial reorganisation of workers were immense. Not only did containerisation transform transport labour from purely manual to partly mechanised and now automated, but it also led to waves of redundancies (Herod 2001: 70-78). In addition, as containerisation reduced the time ships spent at the port, it reduced the opportunities for seafarers to link up with the local working class and organise unions.

In short, various technological advances, processes of standardisation, and different forms of storage have enabled an immense speed and volume of goods and passengers to be transported today. However, as Bonacich (2003: 45) argues, despite the technical innovations in logistics, "the contradiction between supply and demand is far from being resolved, and never can be under capitalism". New trade wars, protectionism, and regionalism are emerging and pose enormous risks to the transport industry. While the globalisation of value chains has enabled shipping companies to become potential masters of global supply chains, current developments are challenging this perspective. In addition, spatial constraints and the significant investment required to build alternative transport infrastructure have become obstacles for the transport industry as a whole.

3.7 Fixed and Circulating Capital

Contrary to what has been claimed, there is an exception for products that do not require transport logistics to reach the market and become commodities. Logistics infrastructure is built, sold, and consumed in the same *space*. They are produced where they are needed.

As we have seen, use value determines the length of time over which a good can be sold and consumed. In addition, the commodity and its character-

istics also determine the time of production. The time of capital in the four spheres of production, exchange, circulation, and consumption defines its role as fixed or circulating capital. Comparing, for example, the commodities bread and port, it is clear that it takes a relatively shorter time to produce bread (circulating capital) than it does to produce ports or ships (fixed capital). In addition, the period of circulation is linked to the speed of consumption. Bread must be consumed within a short time, otherwise, it will spoil and lose its value. Similarly, the port as a commodity needs a long time to be consumed before cranes are scrapped and berths are maintained. It, therefore, ties up capital for a longer period. The port is consumed in the production process. Railways, motorways, and the moving parts of logistics such as containers, ships, and aircraft are expensive and tie up capital for a long time before new infrastructure and ships can be built. If there is a global competition for transport capacity, the turnover time may be extended; scrapping will be delayed, affecting the ship and container building industry.

Transport infrastructures are, by their very nature, components of the circulation of capital, since they both fix capital and enable it to circulate. Although fixed and circulating capital seem to contradict each other, like storage and seamless flow, neither can exist without the other. Every commodity must change location in order to access the market where its implicit surplus value can be realised. The circulation of capital is impossible without ships, boats, planes, drones, trains, lorries, cars, and their associated infrastructure applications. Ports or airports lose their utility value if they cannot function for the smooth and seamless movement of goods and passengers (Harvey 2015: 175-176).

The production of vehicles for logistics, like ships, trains, planes, or transshipment centres like ports and airports, were often projects of trusts and state bonds to secure the long turnover time (Marx [1894] 1972: 273). The historical periodisation of turnover time and possible social and political changes increase the risk of failure of mega-infrastructure projects (Marx [1885] 1971: 255-256).[28] The "built environment" and political and economic infrastructures, such as colonial trade, were built on capitalist collaboration and joint ventures (McNally 2020: 114).

Increased productivity means a reduction in the time it takes to produce a good. Time has an impact on the amount of energy and machinery used, and it also has an impact on the volume of commodities, which is constantly increasing, feeding into global mass production and consumption. The volume of commodities travelling from one place to an other increases as a result of these developments: A considerable amount of capital circulates, and an immense amount of money can be reinvested in further logistical infrastructure and the

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28 When we look at the infrastructure projects worldwide, we can still find examples of huge airports, bridges, and cargo transport projects of all kind which have become mass grave for a capital such as the airports in New Mexico, Berlin and Istanbul.

production of commodities, i.e., fixed and circulating capital (Marx [1885] 1971: 254).[29] Invested capital tends to grow with the development of infrastructure and shifts in the physical organisation and reproduction of labour (Orzeck 2007: 501-502). In order to transport larger volumes of goods, new physical routes of circulation have to be installed to move primary materials in one direction and finished products in the other (Marx [1894] 1972: 420-422). To feed growing productivity and thus volumes, the development of canals, wheels, steam power and railways had a revolutionary impact on regional and global value chains long before the invention of the container and the current "logistics or transport revolution" (Marx 1971: 735).

Ports and Airports in Motion
The speed and volume of transport have increased enormously in recent decades. This has made ports and airports more vulnerable and has led to competition in the logistics sector to keep prices down and to casualise labour. At the same time, there has been a trend towards monopolisation in the transport sector, with giant shipping/port/forwarding companies controlling the price of transport and forcing small truck drivers etc., to adapt.

One reason for the monopolisation of transport is that space is limited. Different companies can use the same technology, but they cannot use the exact location to build a warehouse or a railway line (Harvey 2014: 161). States can use this spatial monopoly and raise transport costs for foreign companies to protect the domestic market. The privatisation of transport and falling transport costs can partially undermine such monopolies and flexible transport regardless of borders (ibid.).

Monopoly and space constraints have also created chokepoints, despite attempts to move ports and airports out of cities and find alternative areas to build alternative hubs and routes. Certain shipping routes are short enough to link production sites and markets. Although shipping routes appear to be "naturally made" and "leave little trace but the foam", they follow historically inscribed patterns crystallised on maps and charts (Khalili 2020b: 14-15). The instruments to navigate the sea are made and remade today according to changes of

… [F]orbidden areas, coastal zones, submarine ammunition dumping grounds, port approaches, and less frequent and often fascinating notations about whales, anomalous

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29 As Bill Mc Kibben (2020) writes in "The New Yorker": "2020 was the year in which the weight of "human-made mass"—all the stuff we've built and accumulated—exceeded the weight of biomass on the planet. That is to say, our built environment now weighs more than all the living things, including humans, on the globe. Buildings, roads, and other infrastructure, for instance, weigh about eleven hundred gigatons, while every tree and shrub, set on a scale, would weigh about nine hundred gigatons." McKibben, Bill (2020), Our Stuff Weighs More Than All Living Things on the Planet. The New Yorker, https://www. newyorker.com/news/annals-of-a-warming-planet/
our-stuff-weighs-more-than-all-living-things-on-the-planet [Access: 06.01.2021].

magnetic zones, volcanic activity, and treacherous reefs that had been sighted but not confirmed … the one legend that was repeated consistently across all charts was a warning about taking care with dragging the anchor along the seabed for fear of snagging submarine cables and pipelines. (Khalili 2020b: 16)

The development of chokepoints has implications for economies of scale. The Suez Canal is one of the world's most critical political, economic, and naval chokepoints. According to Khalili, the closure of the canal due to "the invasion of Egypt by Britain, France and Israel, and again for eight years after the 1967 war – had its extraordinary effect on global shipping" (Khalili 2020b: 35). Since the closure forced shipping companies to sail around the Cape of Good Hope, they invested in larger ships to carry more cargo, as not only the routes but also the space on the ships is limited. As a result, "Very Large Crude Carriers (VLCCs) and Ultra Large Crude Carriers (ULCCs)" were built (ibid.). This development also affected the shipbuilding industry: Since the closure of the Suez Canal, the Portuguese Lisnave shipyard has remained the closest industry for ship maintenance. The closure of the Suez Canal influenced the short period of industrialisation around the port of Lisbon, leading to a rapid increase in the industrial workforce, which would later become one of the main strongholds of the Portuguese Revolution.

In addition, fuel costs rose as a result of the 1973 oil crisis, forcing fleets to slow down and reduce the number of ocean voyages. This led to new economies of scale and an increase in containerised cargo of "40 per cent in 1973 alone" (Levinson 2006: 228-236). Bulk carriers have doubled in size, general cargo ships have tripled in size, container ships have quadrupled in size, and oil tankers are as much as nine times larger than they were twenty years ago (UNCTAD 2020: 36).

The increasing number and size of ships have had an impact on ports. Many terminals have become too small and have literally been moved to berth in order to increase import volumes (Bonacich/Lara 2009: 9). This relocation and the construction of new ports is leading to the decline of former primary ports and port cities. New, larger ports are being built and expanded outside city centres, without the urban and working culture of a port city. Such developments also affect how workers can organise solidarity and a culture of resistance against attacks on their autonomy and Social Reproduction Metabolism, as the changes in the port of Santos in the 1980s showed.

A similar trend can be seen in the expansion and relocation of airports. However, unlike shipping, airports have not had to move out of city centres as a result of the increasing size of ships. While new cargo ships are still being built with increased measures, the peak in aircraft size has already been passed. The largest passenger aircraft is the four-engine A380, which consumes much more fuel than two-engine aircraft. Although the turnover time of aircraft is between 20 and 25 years, companies have already started to scrap the A380 after ten years to save costs (UK30 2017: item 75). Thus, while the maritime

industry is still increasing the size of the ships, the aviation industry is concentrating on increasing the number of ships to benefit from economies of scale.

Today, a third of the world's goods are transported by air, including perishables and rare materials such as diamonds. Furthermore, while air travel was relatively affordable for the wealthy until the 1980s, the development of low-cost airlines allowed a massive increase in global passenger traffic. This process required a change in airports and, consequently, the infrastructure to access them. While space in city centres is limited, airports, like ports, have moved out of urban areas (with exceptions, see Alke Jenss (2020) on the Colombian port of Buenaventura), making them more accessible to trade and passengers but less accessible to workers and activists. This movement affects the Social Reproduction Metabolism of workers and also affects the organisation of strikes and protests in the air and on the waterfront.

3.8 Workers' Struggles on the Lines between M-C-M'

As a part of the political economy, the transport sector has changed enormously in recent decades. Workers at the chokepoints and in logistics are also indirectly confronted with Marx's real abstractions of use value, transport as a commodity and site of production, turnover time, and fixed and circulating capital, especially in relation to their Social Reproduction Metabolism or when they go on strike. To outline the consequences of such a confrontation, I will now move to a more concrete level of abstraction: the dockworkers' strikes in Portugal and Brazil in 2016 and 2018.

Regarding perishable and time-sensitive goods, dockers in Lisbon reported that they worked more during a strike in spring 2016 than during regular working hours. The reason for this was that the SEAL union had received many requests from different companies registering their goods as "perishable" (P13_2 2017: item 1). The Portuguese government allowed the strike but demanded that goods for the Portuguese islands, cattle, medicines, and perishable goods had to be transferred despite the strike. This meant that dockers had to open containers and allow lorry drivers to take the goods to other ports and some shipping companies to transport them. In some cases, however, the classification of goods as perishable or time-sensitive was disputed:

… [T]he curious thing about the 38 days here of strike … We work 24/7 more with the cereals for making bread and we worked 24 four hours, and that is not minimum service … here in the union we have to manage to make all the scales to the people working. We had that experience, but the guys were fantastic … They understand it, and it was a rough time, but … we spent all day all the days here at the union just dealing with that. And … we were evaluating all the documents that came from that. We were completely bombarded with papers from the company saying this is perishable things that were ridiculous. They were not

perishable things … A guy was having a container parked inside the Port of Lisbon, which contained rounded blades to cut cotton to make, I think it was some kind of drink. (P13_2 2017: items 1-2)

The customer was worried that these blades would be affected by the salt-water near the port river. The interviewee (P13_2 2017: items 2-5) commented on this incident:

Our terminal, it's on the river side, we don't have salt here, but if you put the container on a ship and you get a torment with 30-foot waves, you get salt for real. This really looks like a joke, but this really happened … "The container will stay; this is not perishable!" … Just to break the strike, everything was perishable.

The necessity for companies and state apparatuses to enforce the movement of commodities entered into a more serious conflict towards the end of the strike in 2016.

At the end of the strike, we had not the army in the territory, but we have the police defending the scabs. I said before that cargo must go through this port to see if there is radioactivity inside. But to break the strike, they could move the cargo throughout the door, you know, from the back door! And the scabs using boats from the Port Authority to go from the river in the terminal … And they even complained, the chief of police … he even complained that we made a not authorized demonstration … And they called me then it was horrible. All the dockworkers went there to Alcantra, to Lisbon. And how I gave interviews, there is no firewalls there were truck drivers scab truck drivers inside the terminal. The other guy from the river and from the port authority got inside to work inside the terminal. And as I said, the cargo moving from the back door without control or radioactivity as it should be! … I believe with very critical situation inside their factories this happened. There are secondary side effects from this. … From every strike. (P06_3 2017: items 1-3)

In the introduction, I point out that the dockworkers' union, the SEAL leader, was not organising picket lines, as 100 per cent of his colleagues participated in the strike, in 2012. However, this experience changed their view and also the form of labour struggles in the port.

In autumn 2018, during a strike in Setúbal, the same port operator as in Lisbon, Yilport, recruited untrained workers at the terminal to load Volkswagen cars onto a ship during the strike. They took about three days to load what the trained dockers, who were fighting for a permanent contract, would have done in a few hours (P33_1 2019: item 36).

Also, at the port of Santos, union officials said they would ensure the transport of medicines during the strike.

If we were to unload, we would unload a ship full of medicines. Even during the strike, we would unload because hospitals should not be deprived of medicines in order to get to another product that is urgently needed. (B47 2018: item 56; own translation [AE])

Although medicines are also goods that are not necessarily considered "perishable", dockers regard them to be time-sensitive goods, reflecting their close relationship with the health sector due to their experience of accidents at work. They agreed with the government on a scheme to unload medical goods in

Lisbon. In Santos, the union decided to unload the medicines itself (B47 2018: item 56). However, for the car company Volkswagen and the blade manufacturer, the "urge" to transport their goods was driven by the competitive and risky threat of losing market share.

With regard to transport as a production site and a commodity, I would like to emphasise that the labour power of transport workers is also seen as a commodity in the industry. In order to keep costs down, there are various attempts by shipping companies in particular, but also by port operators and state apparatuses, to reduce wages and make work more flexible, by pushing the physical and mental limits of workers further and further, endangering their very Social Reproduction Metabolism, i.e., their ability to work and reproduce, or even their lives as a whole. As a Brazilian dockworker pointed out:

There is a demand for work in ports. But the shipowners' view of the ports and port workers is that in the future they will embrace and determine the rules of the game concerning the port worker. (B67 2018: item 5; own translation [AE])

The quote underlines the current trend in the maritime industry, where shipping companies are increasingly becoming supply chain masters, interested in reducing labour costs on ships and at every point in the transport chain.

In the case of storage space, the Alberto Santos Dumont airport in Brazil was the site of a dispute over changing and rest facilities for airport workers. Here, the airport space had become so central to the storage and sale of goods in shopping centres that the airport authority refused to locate the space for a changing and break room for airport workers on the airport site. Instead, workers had to enter a container underneath the airport to change and put on their uniforms and protective gear before entering their workplace (B63 2018: item 3). This example points to what I will describe later in section 7.3.4 as a spatial conflict over the Metabolism of Social Reproduction.

Another spatial conflict arises from the relocation of ports and airports. In three of the four cases studied in this paper, airport and port workers reported long commutes. As ports and airports have moved out of city centres in all four cases, workers' need to access their workplace or reproductive space, such as the break room, toilet, or home, has increased. In Brazil, a pilot reported that he and his colleagues regularly slept in the cabin of an aircraft before departing for a new flight (B64 2018: item 11). Airport workers in Portugal pointed out that they often slept in their cars before their next shift started so that they would be ready for work. The problem of distance is more significant in a country like Brazil, where the spatial distances resulting from the history of colonialism are particularly large. Here, dockers in Santos reported that they often slept in the hull of a ship between shifts or stayed overnight in the port. However, workers in small countries such as Portugal are also struggling with this spatial conflict in their Social Reproduction Metabolism, as ports and airports move and the distance to their homes increases.

3.9 Closing Remarks on Logistics

In this chapter, I approached capital accumulation from the distribution and consumption side. I used Marx's concepts of the use value of the commodity, transport as a commodity and as a site of production, turnover time and storage, and fixed and circulating capital to unravel the special role of logistics in capitalism and its implications for today's transport industry. Starting from the smallest particle of the capitalist system, the commodity, and the characteristics of its use-value, Marx reveals the processes of various transport revolutions and the need to globalise and connect markets and production sites worldwide. He shows how seemingly contradictory forms of capital, such as storage and flow, circulating and fixed capital, are internally connected and interdependent. The current spatial, technical, political, and economic limits of transport infrastructures are driven by the need to accelerate circulation through speed or volume. Capitalists always seek to overcome the obstacles to capital accumulation. Even if the current limitations of space, the impossibility of developing bigger planes, global tensions, and the decline of global value chains seem to be serious spatio-historical obstacles, they will be addressed by the capitalists in the future.

I pointed out in the text that the logistical revolution also has strong implications for the conditions of workers at chokepoints, creating spatial and temporal conflicts over their Social Reproduction Metabolism, as will be explored in more detail in chapter seven. What has been neglected in this text is the violent history of the implementation of transport routes, which is partly related to the fact that Marx treats transport and communication as an essential but still technical feature of capitalism. However, along with strategy and tactics, military logistics developed as a third subject of warfare between 1560 and 1715, expressing the need to respond to the supply of growing armies and situations in which more prominent cities and regions were besieged (Neilson 2012: 323). This period is also linked to the emergence of colonial commerce, which required knowledge of warfare and trade. Portuguese imperialism in the 15th and 16th centuries encompassed both (Headrick 2012: 20). This history and its vestiges will be examined in more detail in the next chapter.

4. A Spatially Embedded History of Chokepoints

This chapter outlines the history and contemporary context of the four chokepoints in Portugal and Brazil that have been the battleground for various labour conflicts. Implementing Marx's analysis of transport infrastructure with a focus on war and violence, the chapter reveals the spatial-historical developments of the Portuguese port and airport of Lisbon and the Brazilian port of Santos and Alberto Santos Dumont airport. The development of maritime transport and ports in Brazil is mainly linked to Portuguese colonialism. Less obvious is the fact that the history of aviation and airports also has its historical roots in Portuguese colonialism. Aviation is also characterised by delayed industrialisation and subsequent infrastructural disadvantages in Brazil and Portugal. This chapter aims to explore infrastructures as reservoirs of (neo)colonial power on the one hand (van Laak 2018: 140-141), and as functional corridors for the circulation of capital on the other. Both characteristics have complementary and contradictory effects on these ports and airports, making them chokepoints.

The chapter emphasises the definition of chokepoints as places where historically and spatially embedded infrastructural circumstances slow down the circulation of goods and endanger the realisation of exchange value for the region, the state, and even the global economy. The concentration of goods, passengers, and commodities at ports and airports does not pose a risk in all logistical hubs of a region. There are small airports, ports, neglected roads and railways, and other transport infrastructures whose blockages would hardly be noticed. However, the logistical hubs presented in this study have played a crucial role in the infrastructural, political, and economic history of global trade and the formation of the states of Brazil and Portugal. Their blockade has the potential to trigger serious political and economic tensions. This spatio-historical embedding of the four chokepoints also contextualises the changes in the division of labour, the impact on workers' bodies, labour laws, reproduction regimes, and struggles in the chapters that follow.

Key questions that inform this chapter are: Why are the capitalist mode of production and capital circulation unable to eliminate chokepoints and ensure a seamless flow of capital? How is this reflected in the four chokepoints chosen for this book?

I will show how the development of centralised logistical infrastructures in the Portuguese Empire was complementary to the decentralised, extractive infrastructures that still prevail in Brazil. I will explore how the centralisation of commercial capital in Lisbon and its port was only possible through the expansion of transport infrastructures towards new markets and resources, which led to the creation of maritime routes and new ports.

The history will be traced at specific points along the timeline between 1415 and 2020. It begins with Portuguese colonialism and discusses post- and neocolonial infrastructural developments. The chapter also outlines the role of neoliberalism and the contemporary Chinese logistical empire in both regions. The chapter also emphasises the critical logistics perspective, highlighting the economic, military, and violent history of transport and communication infrastructure (Cowen 2014: 3).

4.1 A History of Portuguese and Brazilian Ports

Ports are factories for the intermodal transfer of vehicles. From ship to boat or smaller vessel, from lorry or railway wagon to ship and vice versa. The change of vehicle takes place via cranes, trucks, tugs, ropes, winches, and workers' bodies. Different commodities and their value in use require specific cranes, bags, containers, cables, refrigeration techniques, security and safety restrictions (regarding explosive/radioactive/toxic materials), storage, and knowledge of each commodity. In addition, ports include cruise terminals and oil and gas platforms with their concentrated technologies and expertise. Therefore, the complexity of infrastructure and knowledge inevitably increases with the number of different services and goods. The longer it takes to load and unload a ship, the higher the costs. When production, technologies, exports, and imports of commodities change, when economic crises and (trade) wars break out, ports, which are specifically marked as chokepoints, are the first spaces under pressure to adapt.

Following Brandon et al. (2019: 18), I analyse the four chokepoints below to show that there have been different types of labour relations and segregation in interconnected spaces.

…[T]hat fueled the integration of world markets" and "was often conditioned by inter-oceanic processes, which in individual port cities received a variety of expressions depending on the ways in which specific local, regional, and global forces combined at a given time and place."

4.1.1 The Portuguese Empire and the Port of Lisbon

In Portugal, capital accumulation did not start from production but from distribution. On the eve of colonialism, Portugal was a feudal state. At the beginning of the 15th century, it sent younger nobles such as Prince Henry, Bartolomeo Dias, and Vasco da Gama to explore new sources of income. These quests were attempts to overcome the feudal economic crisis, characterised by lower productivity and declining harvests, famine, starvation, peasant strug-

gles and low resilience to diseases such as the Black Death (Braudel 1985: 75-76; Moore 2003: 314; McNally 2020: 93).[30] The European feudal crisis in the 14th century resulted from an early metabolic rift due to the systematic exploitation of labour and nature, e.g., peasants and soil (Braudel 1985: 116-118; Patel/Moore 2018: 21). It led to a dramatic decline in rural and urban population, and thus in labour power, not just because land degradation "demanded more labour. It demanded more of the workers." (Moore 2003: 355).[31]

Arboleda (2020: 101) notes that "the production of primary commodities was the main breeding ground for innovations in maritime and land transport". Because of the spatial differentiation between large-scale production sites in Latin America and distant manufacturing and financial centres in Europe, "modern economic powers were under constant pressure to reduce transport costs in order to achieve trade dominance" (ibid.).

What kind of commodities were needed at this time of feudal crisis? Spatially sensitive timber to build ships and warehouses to access and store wheat to feed the local population. Spices were needed to preserve time-sensitive foods for longer voyages and to make more space for time-sensitive goods. But the most pressing need was for labour. While in other European states, the first solutions to the feudal crisis were changes in agricultural techniques, peasant oppression, and dispossession, the Portuguese empire was looking outwards.

From the first hour of the emergence of capitalist logistical networks, warfare was essential: The Portuguese state, with its small population, could not organise a large standing army. Instead, ships were loaded with cannons, guns, and ammunition and transformed into floating cavalry (Headrick 2012: 20; 59-61). One of the first transport revolutions to support the emergence of a proto-capitalist trading system began with the improvement of nautical and military technologies. The "caravela-portuguesa" fleet enabled the Portuguese aristocracy to organise a global trading network (Johnson Jr. 1987: 1).[32] Instead of colonising land, the Portuguese navy-built port bastions. Initially, these consisted of armed ships anchored on the shore and large militarised warehouses, called "forteiras", such as factories (Mauro 1961: 2; O'Flanagan 2011: 32-35). The Portuguese Empire built one of the first permanent maritime global trade networks, whose navigation routes are still used today (Khalili 2020b: 20-21).

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30   In contrast, the British Empire develop a form of agrarian capitalism which initially made it a "latecomer" in the colonialist period. However, contrary to Portugal and Spain, it was later able to "digest" the inflows from oversea colonies due to a higher manufacturing structure and the violent instalment of wage labour (McNally 2020: 123).

31   According to Costa et al. (2016: 6), the Black Death was responsible for the deaths of almost a third of the Portuguese population.

32   Saunders (2010: 11) speaks of three different types of such vessels; the caraval which could carry 50-100 slaves, the small caravelâo which transported people between the different West-African coasts, and the big *nau*, a three-masted round ship, which was able to carry large cargo as well as up to 400 slaves additionally to a crew of between 15 and 30 people.

Patel and Moore (2018: 55) write about the oldest surviving Portuguese global map from 1502 that "the modern map did not merely describe the world; it was a technology of conquest". From then on, maps were powerful tools for establishing global lines of trade and expressing geopolitical claims to power (Bronwen 2018: 134). To this day, the maritime routes that link ports in many parts of the world are the bearers of crucial technological advances such as the telegraph, the telephone, and fibre optic cables. Their installation was enforced to improve communication and increase control over French and British colonies, since the "first telegraph lines were laid across the Atlantic … the next two were between France and Algeria and between Britain and India" (Khalili 2020b: 25).

At the beginning of colonialism, the Portuguese empire controlled the inner-Asian trade in the Indian Ocean due to their specific shipping transport technologies (Saunders 2010: 11). They outmanoeuvred the mighty Ottoman Empire, which controlled the European-Asian sea routes across the Mediterranean (Mauro 1961: 4). Portuguese ports, especially Lisbon, became important hubs for spices, gold and later silver, diamonds and enslaved people, leading to an early accumulation of commodity capital. As discussed above, blockages in the circulation of capital can result from periods of overproduction and underconsumption. A crisis of underconsumption can also occur in the sphere of production, when capital inflows cannot be sustained due to a lack of labour or an inefficient labour regime. Such a crisis developed in the Portuguese Empire, which did not have enough workers to produce goods or work on plantations. The new powerful position of the small Portuguese empire in world trade led to immense wealth and the risk of a capital absorption crisis (McNally 2020: 123).

Moving further outwards, the Portuguese aristocracy, supported by Italian merchants, began to sail along the western coast of Africa in search of booty and slave labour (Johnson Jr. 1987: 2). The Church supported these voyages as a spatial extension of the "Reconquista" (the religiously led struggle against the "Mouros"/Islamic religion) towards North Africa. Unable to succeed in the war at Ceuta to conquer land in the Moroccan region (around the 1430s), the Portuguese navy sailed further south towards the Saharan and sub-Saharan West African coast (Wolf 1994: 461). The new factories installed on the West African banks were militarily protected, as their primary commodities were enslaved black fishermen and women, hunters, and children from the Idzâgen of the Río de Oro (Vogt 1973b: 2; Saunders 2010: 5; Dawson 2013: 171).[33] Portugal was the only European maritime empire that robbed people and brought them back home (Wolf 1994: 456). At the end of the fifteenth century, the Portuguese king signed agreements with the ruling classes of various West and Central African regions that allowed trade between their states (Wolf 1994:

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33   The term "factory" originally stems from the Portuguese instalment of "slave warehouses".

469; Saunders 2010: 5). This agreement allowed traders to enter the forts, which were already filled with captured people, to exchange goods and to bring enslaved people to Lisbon.[34]

In setting up its network of factories, such as warehouses for voluntary storage, the Portuguese imperial power developed a form of mercantile or commercial capitalism that allowed objects to become commodities in exchange (Mauro 1961: 2). These commodities were not produced on the grounds of a capitalist mode of production, but were created and accessed through plunder. Slave labour, however, already produced surplus value and became the underlying basis for capital accumulation. They were forced to dig for gold on the African gold coast around Mina, or later to work on sugar cane plantations on the island of São Tomé and Madeira (Vogt 1973a; 1973b; Patel/Moore 2018). Portugal is thus a practical example of the theory that the cradle of the capitalist economic system was in "primitive" accumulation, i.e., in other violent modes of production that became involved in the circulation and accumulation of capital (Marx [1867] 1957: 791). Through this instalment of a network of production and circulation on a global scale, the Portuguese Empire, and later to a much greater extent the French and British colonialists, "linked previously isolated or loosely articulated territories into a single division of labour" under the driving force of global capitalist competition (Moore 2003: 311).

As Daniel R. Headrick (2011: 28) summarises,

Portugal would seem to be a most unlikely nation to found the first empire of the sea. It was a small kingdom, with little more than a million inhabitants in the fifteenth century. With a population of farmers and fishermen and few natural resources, it was very poor compared to the wealthy city-states of Italy or such large kingdoms as France or England. Furthermore, it was frequently at war, either with its large neighbor Castile or with the Muslim states of North Africa. Yet this minor kingdom at the southwestern corner of Europe succeeded in becoming a world power for a century, paving the way for all the empires that followed.

Stretching from Nagasaki to East Timor, from Singapore to Goa, from Mozambique to Angola and later to Brazil, the Portuguese trade network already shared several key characteristics with contemporary globalisation (Mauro 1961: 2). Linking Europe, Asia, the Americas and Africa, the empire took advantage of global geological variations to harvest various crops on a large scale and to monopolise trade routes (ibid.).

The establishment of a network of warehouses in overseas ports and slave labour in Portugal and the conquered West African islands helped to cover their overaccumulation/digestion crisis for a few decades. Afterwards, the

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34　The reason for such an arrangement can be found in an important health question: The life expectancy of Europeans at the African coast was short, due to contagious and persistent fevers, dysentery, consumption, dropsy, numerous parasites and other diseases which according to Braudel (1985: 34–35) could carry off a whole crew. Diseases could even be transported back to a home port where the diseases could spread and infect the local population, see also Harding (2016: 122–123).

French, Dutch and British empires, which had turned to "free labour" much earlier than the Iberian states, were financially strong enough to defeat the Iberian naval powers (Arboleda 2020: 34). Due to the over-cultivation of land and the decline of fertile soil, the Portuguese Empire sought new agricultural areas on the islands near the African coast, such as Madeira, Principe, São Tomé and Cabo Verde.

With this in mind, it is worth taking a closer look at the central port city and capital of the Portuguese Empire. The Port of Lisbon has a long history that predates colonialism and capitalism. Built around 1200 BC, it was the westernmost market and outpost of the Roman Empire and later the Arab kingdom of Al-Andalus. Located in the south of Portugal, the port was an early hub for cultural, economic, and political exchange. After the "Reconquista" in the 13th century, which dispossessed the Mouros and increased Christian influence, Lisbon emerged as a major European port city until the famous earthquake of 1755, which destroyed major warehouses, churches, manufacturing plants and two-thirds of residential areas (Braudel 1985: 439-440; Pereira 2009: 468).[35] As the Portuguese Empire evolved into a mercantile capitalist state, Lisbon became the central hub for spices, enslaved people, gold, sugar, diamonds, and tobacco. The Portuguese crown centralised political and economic control over trade. Lisbon became the only port for the arrival of goods, which were stored and listed in the central warehouses "Casa da Guiné, da Mina e da Índia" in 1503 for the Indian trade, the West African trade and the gold from the African mines. The "Casa da Índia", as it became known, was not only a warehouse for the storage of goods, but also housed the tax and customs offices and one of the world's first post offices. At this time, Portugal had a monopoly on silk, spices and enslaved people, and operated through an emerging network of warehouses and storehouses to keep the circulation of goods going. In contrast, enslaved people were held in the Casa dos Escravos ("House of Slaves"), which included an integrated prison for escaped slaves, space for medical treatment, and a register listing various physical characteristics of enslaved Black people (Saunders 2010: 10).

As a result of Lisbon's emergence as one of the world's major trading centres, the port had to be expanded. New infrastructures were created to handle the influx of gold, raw materials, and (enslaved) people (Antunes 2007: 116-118). During this period, the seafront was opened up, and new moorings and berths were built for the hundreds of ships that arrived and departed from Lisbon. More warehouses had to be built for the storage of goods, as well as the

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35 The earthquake was one of the largest natural disasters in the history of Western Europe. It affected not only Lisbon, but also several Portuguese ports to the south of Lisbon, as well as cities in Morocco and Spain. The earthquake was followed by a tsunami, which flooded part of the already destroyed city. Another part was destroyed by the candles and fireplaces that were scattered throughout the medieval wooden buildings, causing a conflagration that lasted several days. It is estimated that between 32 and 48 per cent of the GDP was lost. (Pereira 2009: 467).

market squares and surrounding neighbourhoods, which together "gave Lisbon its familiar shape" (ibid.).

The port flourished as smaller ports sprang up along the West African and Asian coastlines, supplying the imperial port with a steady stream of merchant capital. The Atlantic trade in enslaved people, gold, spices, timber, and sugar was made possible by well-organised divisions of labour and sophisticated logistical networks. Yet Lisbon, as the centre of the empire, controlled these divisions centrally. The port was an early economic and political hub of Portugal and global trade.

The concentration of commercial capital in Lisbon was unsustainable for the local nobility (later the Habsburg monarchy), merchants, and the almost non-existent working class.[36] Portugal was impoverished by its accumulation. It sent gold to Antwerp, Seville, Venice, Genoa and other empires to repay loans for investments in gold mines and sugar plantations (Fausto/Fausto 2014: 36). Over time, the Portuguese had to expand further to compete with emerging maritime empires that used state-sanctioned and supported piracy to capture Portuguese fleets and undermine their monopoly of transatlantic trade (O'Fanagan 2011: 31). The combination of the new type of militarised ships, the supply of ships with spices and different food preservation techniques, and the expanding credit system allowed the Portuguese empire to expand. As the influx of goods and enslaved people increased, more people moved to Lisbon, and more food and goods were needed, while the new colonies demanded more credit to invest in their settlements.

4.1.2 Colonialist Expansion: from Lisbon to Santos

In April 1500, the first Portuguese fleet arrived at the coast of the region, later called Brazil after the "Brazilian wood" found in the forests (Fausto/Fausto 2014: 6).[37] The first settlement was founded in the 1530s near the later port of Santos in São Vincente. While the port served as an early hub for sugar exports, maritime routes were established between Bahia and the later port city and first colonial capital, Salvador. Salvador-Gold Coast was the shortest sea route between the West African coast and the Americas. It also allowed the northern colonial officers to build a better infrastructure between the sugar plantations

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36 Although it should be added that, according to Braudel (1986: 148-149), Portugal established a powerful monetary system comparatively early, which led to an expansion of wage labour in Lisbon and the countryside.

37 From a postcolonialist perspective, it is convenient to tell the story of transport infrastructure and its origins in capitalist society. However, the history of what would later be called Brazil and South/Latin America does not begin here, but apparently long before the region was "discovered" by European colonialists. I do not want to go into the construction of ports or infrastructure before colonialism. I am aware, however, and would like to point out, that there is a tendency to ignore the "other" histories of the continent.

and, later, the gold mines. At the same time, Santos was degraded from a sugar port to a hub for the importation of salt (Queiróz et al. 2015: 41).

The Brazilian colony was the ideal region for spatially sensitive and primary commodities. Firstly, there was the utility value of Brazilian timber, which helped to build more ships and fleets capable of sailing along the continent's coastline. In Europe, wood was a relatively expensive commodity until the 19th century, when coal was introduced as the primary fossil fuel in production (Braudel 1985: 362). Wood was the only product used for heating. It was also used for construction, tool making, pumping machines, wheels and carts, boats and ships. In the 16th century, forests were massively depleted, and the Iberian states had to import timber from the Netherlands and eastern and central Europe. The Amazon and coastal forests were worth a fortune. In addition to providing heat and energy for sugar processing, the red colour of brazilwood was also used as a colourant (ibid. 390-392).

From the 17th century, gold was extracted from the mines of Bahia in greater quantities than ever before, creating wealth for the Portuguese crown. Unable to invest it, the Portuguese empire transported the gold to wealthier European states and cities in Flanders, Venice, Antwerp, Hamburg, and later London in exchange for machinery for loans to produce sugar. In this way, many European states benefited indirectly from Portuguese ventures and colonialism before building their colonial infrastructures abroad (Arboleda 2020: 34). For a time, the Brazilian colony was the leading supplier of gold and influenced the balance of the global silver and gold market (Braudel 1985: 486; 503).

Another geographically sensitive commodity is sugar. Initially, slave labour on sugar plantations in Brazil was rare; European workers and Indians were the first groups exploited in the fields. A century later, however, the workers were exclusively African and Afro-Brazilian enslaved people (Fausto/Fausto 2014: 26-27). Sugar, and later tobacco and coffee, were initially considered luxury commodities in Europe and later in North America. Later, the combination of large plantation areas and the increase in slave labour led to a drop in prices and allowed mass supply to European and, later North American markets. Tobacco, coffee, and sugar are known for their stimulating effects (Braudel 1985: 263). Thus, the consumption of these three commodities spread among the emerging European working class, allowing workers to work longer before having to reproduce through sleep and rest. Braudel reports that in the Parisian working class, the morning café au lait sometimes even replaced a complete meal, reducing the number of meals to two a day and, consequently, the cost-of-living and wages (ibid. 273-274). It also increased workers' productivity and lengthened the working day. Coffee was later to be the most important spatially sensitive commodity, transforming Brazil's port and land infrastructure in the 19th century. Coffea arabica, imported from Ethiopia, was brought to Brazil, and, using the sugar plantations as a blueprint, the system of

Black slave labour to work the fields was initially reinstated until it was replaced by wage labour (Honorato/Ribeiro 2014: 175). While this development led to a decline in coffee prices worldwide, the lack of technological knowledge in the processing and roasting of the coffee bean made Brazilian coffee, such as the "Santos brand", one of the cheapest coffees in Europe, available to people with low incomes and the working class.

The port of Santos and its city played an essential role in the processing and transport of these commodities and the technological, political, and economic changes associated with them. Despite being the region of the first Portuguese settlements, Santos remained a relatively moderate city compared to Salvador and Rio de Janeiro until the mid-19th century (Da Silva/Gitahy 2013: 12). It serves as the main hub for Brazil's current largest city, São Paulo. Santos grew in importance after Brazil gained independence from the Portuguese Empire in 1822 and attempted to develop its own imperial power. Previously, colonial trade with Brazil was exclusively reserved for the Portuguese crown and its British ally, but other nations and their fleets were barred from entering Brazilian ports (Honorato/Ribeiro 2014: 173). As a result of the Haitian Revolution and the successful struggle for independence between 1791 and 1804, British sugar entrepreneurs shifted their cultivation areas and moved their businesses to Brazilian farmland (Walvin 2019: 84-85). However, sugar prices fell while coffee prices remained comparatively stable, so coffee plants began to replace sugar cane in the fields. The coffee industry expanded and grew into the country's hinterland. To survive, it depended on the expansion of transport networks and "a viable port for export" (Fausto/Fausto 2014: 111).

In the mid-19th century, Santos' role in the Brazilian economy shifted to that of a major port for coffee exports. The trade in enslaved people ended in 1850. The National Guard was centralised, and the Commercial Code was passed, lifting the embargo on international capitalists operating in Brazil. All this paved the way for an intensified export economy, especially in relation to the spatially sensitive commodity of coffee (Fausto/Fausto 2014: 109-110). Coffee sack sewing shops, warehouse construction, and coffee houses took over the city, along with porters and dockworkers carrying five or more sacks of coffee on their backs (see book cover). A new class of coffee planters emerged from this boom.

At the same period, the invention and massive investment in the steamship made it possible to cross the Atlantic at a much faster speed, with the potential to drastically reduce transport costs. However, this potential was undermined by the remaining slow transport on the ground and in the port itself. Despite their speed, ships still had to wait several months to be dispatched near the port of Santos (B66 2018: item 11).[38] Ships could not dock directly at the dock but

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38   The interviewee stated, "it would take three to six months to unload and reload. That's unthinkable from their costs' point of view. So, the whole pressure on those [port] companies begins from those [shipping] enterprises." (B66 2018: item 11; own translation [AE]).

were anchored in the bay and loaded and unloaded by small boats. The work-force consisted of enslaved people who were transported between the wooden warehouses and the ships, walking on wooden and unstable platforms. The coffee beans themselves were transported via donkeys and slave workers (McPhee 2006: 154-155). Hence, increasingly imperialist and modernised shipping infrastructures clashed with slow colonialist ports (Honorato/Ribeiro 2019: 203). Therefore, coffee plantation owners largely supported railway line constructions connecting coffee fields and ports. However, those instalments of fixed capital were too expensive for the declining Portuguese empire and the emerging independent Brazilian state and its capitalist class alone. Moreover, the Brazilian empire lacked engineers experienced in constructing railways and ports. Unsurprisingly, up to this period, Brazilian engineers were predominantly trained in the Military School, where they specialised in road and bridge-building.

There were no studies on the terrain, winds, or tidal dynamics, nor draftsmen specialised in hydraulic work. Finally, there was a lack of construction engineers and therefore of the ability to solve problems that emerged during project execution. (Honorato/Ribeiro 2019: 206)

British, and later French and Belgian, investors exploited the need for a built environment in Brazil to increase their economic and political influence. They built the first railways in Bahia, Rio de Janeiro, and the state of São Paulo, starting in 1845, eleven years before the first Portuguese railway was built (Cooper 2008: 60; Honorato/Ribeiro 2019: 203). At the same time, Marx was writing about the opening of the Suez Canal, which, after centuries of encircling the Cape of Good Hope, finally gave the European imperialist states access to the Asian and Australian markets at an unprecedented speed (Marx [1867] 1957: 81).

Today, China is discussed as a logistics or infrastructure empire. But at the time, Britain and France were investing in global infrastructure such as the Suez Canal, the Brazilian railways, and the expansion of ports in Portugal. In doing so, they ensured a degree of spatial control in these regions. These investments in fixed capital were necessary because the opening of the Brazilian economy to foreign investment brought the state closer to the influence of the United States, whose companies competed directly with British capitalists for Brazil's raw materials and transport infrastructure (Fausto/Fausto 2014: 147-148). An international layer of engineers emerged, often from military schools, trained to oversee the construction of complex infrastructures that circulated between different port cities (van Dijk/Pinheiro 2003: 94).

Comparably, according to van Dijk and Pinheiro (2003: 93) the loading and unloading speed at the fastest ports in Europe were three days, the slowest ports, among them Lisbon, took three to four weeks.

As coffee became the main Brazilian export and remained in this position until the 1930s, accounting for more than 70 per cent of the Brazilian state's total export revenue (Fausto/Fausto 2014: 161), all obstacles to its seamless production and transport had to be removed. State investment in transport infrastructure and intervention in the coffee market to protect Brazilian companies dominated the Brazilian capitalist state (ibid. 157). In some cases, coffee entrepreneurs, railway and port infrastructure engineers, and investors were the same family or person. One such family, which owned a coffee plantation in São Paulo and used the port of Santos, was the Franco-Brazilian Santos Dumont family. Henrique Dumont oversaw the construction of one of the first railways (Don Pedro II) planned and organised by foreign engineers from Britain in Rio de Janeiro (Honorato/Ribeiro 2019: 206). The need for local engineers stimulated national education systems, and new engineering clubs and polytechnic schools sprang up towards the end of the 19th century. Dumont himself was an engineer and supported the construction of steamboats, railways, and other forms of transport such as the automobile. Dumont was part of a French family that moved to Brazil to participate in the diamond trade, which lost importance with the opening of diamond mines in South Africa (Demartini et al. 2019: 60). He later bought a coffee plantation in the state of São Paulo. As his coffee business grew, he was dubbed the "King of Coffee" (ibid. 61). He also supported the development of aviation by investing in his son Alberto Santos Dumont's studies.

Since the onset of capital accumulation in Brazil was mainly based on wage labour that migrated from Europe and entered Brazil through the port of Santos (Read 2012: 3), the port city has become one of the most important ports in Brazil and, to date, the largest port in Latin America in terms of spatial size. The use value of wage labour was transported from Europe to Brazil in the late 19th and early 20th centuries. The dramatic reduction in transport costs brought about by the steamship made overseas transport affordable for the poor working class. The migrating working class and their labour largely replaced slave labour on farms in the construction and transport sectors (Fausto/Fausto 2014: 28; Silva Nunes et al. 2019: 224). As Brazil's industry is dominated by labour-intensive agricultural commodities, labour migration from South and Central Europe, the Middle East, and Japan was also replaced by the Brazilian state (Fausto/Fausto 2014: 162). The population of Santos tripled within a few years until the First World War. The city became one of the most important in Brazil (B45_1 2018: item 2).

Although most of the infrastructure was built with foreign capital, such as railways, roads, and electricity (Fausto/Fausto 2014: 173), this was not the case for the Santos port infrastructure project. In 1888, the public tender for the modernisation and reconstruction of Santos was won by the Brazilian company Companhia Docas de Santos S/A, which was to have the concession to exploit the ports for 90 years between 1890 and 1980 (B45_3 2018: item 35). The

superstructure of Santos was thus managed by a private company for almost a century (ibid.). The company transformed the "storage industry" by building new warehouses where operators such as coffee traders could store goods free of charge for the first 48 hours. This new fee increased the time pressure on companies, which they passed on to the government to improve the loading and unloading of ships. The Companhia Docas de Santos won further concessions to invest in more berthing space and technology to increase transport speed (Honorato/Ribeiro 2014: 182). Allowing ships to berth directly alongside the docks meant organising an enormous amount of restructuring, from blasting through the rocks to reshaping the natural channel inwards, to destroying inhabited spaces (ibid. 209), especially those where former enslaved people had settled. In the first half of the twentieth century, Companhia Docas de Santos was one of the largest Brazilian companies, expanding its investments into local rail transport, cranes, other warehouses and transport infrastructure. The company employed more than 10,000 people in the 1950s. By the 1970s, half of the population of Santos worked for or was associated with dock work (Queiróz et al. 2015: 42-43).

A network of railways developed around Santos, crystallising the extractive and export-oriented nature of the Brazilian production system (Fausto/Fausto 2014: 111). Roads and railways led mainly to port cities, transporting sugar, coffee, cotton, and rubber outwards. The "annihilation of space" has found its expression in many Latin American port cities. While roads and railways are seamlessly connected to the ports, closer locations further from the dock or parallel to the coast are less connected and, therefore, take much longer to reach.

In the middle of the 20th century, the Brazilian state moved closer to US imperialism. It pushed for the construction of (much cheaper and more flexible) motorways and road transport, while the railways lost their importance and were partially shut down due to a lack of investment, especially during the economic crisis of 1980-1990 (IPEA 2012: 107; van Laak 2018: 219-220). The changes in Brazilian transport infrastructure have meant that in 2015, the circulation of capital by rail alone accounted for 15 per cent, while in countries of the Global North, the average freight transport by rail is 40 per cent (Nowak 2020: 8). At the same time, 58 per cent of Brazilian freight is transported by road (ibid.). Over the past decade, Brazil and other South American states have again transformed themselves into suppliers of scale-sensitive use-value, this time for the emerging Chinese "global supply chain empire" (Arboleda 2020: 65). Brazil is the dominant global soybean farm to reproduce the displaced and growing Chinese proletariat and the growing pork industry; more than 50 per cent of the world's pork is consumed in China (Peine 2013: 199). In addition, Brazilian iron feeds the Chinese "industrial metabolism" (Arboleda 2020: 65).

Due to the high energy of relief and the great distances that characterise the surface of the Brazilian land, as well as the lack of investment in recent dec-

ades, the transport infrastructures around several ports, especially in the south of Brazil, are characterised by damage and traffic congestion. The infrastructural legacy of colonialist and neocolonialist exploitation has not yet been overcome. There are also more recent technological developments in the ports themselves and massive Chinese and private investment in roads, railways, and ports, but spatial congestion remains (Harris 2005: 24; IPEA 2012: 112). While at the end of the nineteenth century industrial capitalism clashed with colonial capitalism over its infrastructures, currently the neoliberal neglect of the road and rail networks around Santos clashes with the interests of a highly technocratic Chinese logistical empire and, specifically, the entanglement between the large pork industry in China and the Brazilian soybean industry (Harris 2005: 8).[39]

Today, Brazil has 37 public river and sea ports and three privatised ports, of which Santos is one (IPEA 2012: 112). Latin America's largest port, which has been transformed from a coffee port to a soybean port, remains one of the world's 14 most critical chokepoints, as traffic has to slow down around the port due to a lack of roads and railways to transport goods to and from the sea. Due to the climate crisis, the port is more frequently exposed to flooding and rising sea levels (Bailey/Wellesley 2017: 33). This development poses problems for the Chinese and Brazilian economies, and for the port workers who operate in these uneven and combined spatial and economic conditions.

4.1.3 The Port of Lisbon in the European Periphery

In the nineteenth century, as the Portuguese empire expanded into Brazil, the ports of Lisbon centralised the economic and political institutions of the Portuguese global empire, which was mainly focused on the production and distribution of primary commodities. The small Portuguese working class was mainly deployed alongside the global empire. For example, the Brazilian gold rush in the late seventeenth century led to significant migration from Portugal to the American colony; Portuguese peasants worked as overseers in Brazil and the African colonies. The Netherlands, Britain, and France processed Portuguese capital, such as sugar and gold from Brazil, and slave labour from Africa. Meanwhile, the Portuguese empire had to import more expensive manufactured goods in exchange for primary commodities, suffering from an import-export trade deficit and increasing public debt (Costa et al. 2016: 9).

While Brazil emerged as an independent state and separated from Portuguese influence in the same period, Portugal strengthened its grip on its African colonies in Mozambique, Angola and Guinea-Bissau (Fernandes et al. 2003:

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39 However, Brazilian soybean value chains are still largely operated by US-controlled TNCs, with the four largest companies being "ADM, Bunge, Cargill and Louis-Dreyfus Commodities" (Peine 2013: 194).

9). The Lisbon earthquake of 1755, emigration to Brazil, the Caribbean, and central and northern European states (Bastos 2018: 66), the loss of the Brazilian colony, and the growing influence of French and British imperialism weakened the Portuguese economy in Europe. The Portuguese ruling class was on the verge of being effectively swallowed up by its neighbour, Spain, France, or Britain.

The transformation of Portugal from one of the largest colonial imperialists in the world to a semi-peripheral or "subalternised" state, and the development of the logistics sector (the steamship, coal as a new energy source, railways) left their mark on the port of Lisbon at the end of the 19th century (Arenas 2015: 353). Due to the economic and political crises of the state, port traffic stagnated for several decades. Like Santos, the port of Lisbon had no permanent berthing facilities for merchant ships apart from the military terminal. As a result, ships still had to be loaded and unloaded in the middle of the Tejo River "by means of barges" (van Dijk/Pinheiro 2003: 93). The image of the port was, therefore, similar to that of Santos in the pre-industrial period.

Consequently, regarding turnaround time, the port was one of the slowest in Europe during the heyday of industrialisation. As Portugal had already abolished slavery in the mid-18th century, port labour was increasingly organised in guilds and the form of wage labour (Queiroz et al. 2019: 51). These structures lasted longer in other European ports, such as Hamburg. However, in Portugal, due to the role of slave labour in the ports, guilds only existed for a century. They were replaced by the casual labour system of daily contracts, which still persists in many Portuguese ports (P34 2019: 2-3).

Unlike Santos, however, the economic pressure to expand the port's capacity and speed did not come from growing export demand for a space-sensitive commodity (coffee). Instead, it was linked to the survival of the Portuguese economy and the state itself.

While a local company organised the expansion of the port of Santos, investment in the fixed capital of the port of Lisbon between 1887 and 1905 was organised and financed by the foreign French company Hersent (Bertlin 1949: 4). Since the Portuguese state could not invest in these infrastructural processes until 1907, the company was granted the concession to exploit the port terminals and the landfill (Pinheiro 2018: 6). French capital also supported the construction of railways, a sewerage system, and gas and electricity infrastructures, employing as in Brazil globally operating engineers. In the case of Lisbon, however, construction progressed slowly due to various obstacles, such as conflicts between the military and the ministries of public affairs over land use and the security risks of the port. At the heart of this conflict was a divide between civilian and military trained engineers and their expertise in logistics (ibid. 7). The construction of the Madrid-Lisbon railway and its planned connection to the port of Lisbon fuelled the fears of capitalist groups and military officials in Portugal of an invasion by even faster-moving Spanish

troops. The rail link would allow them to strategically occupy the country's most important economic and political chokepoint at the time (ibid. 11). Due to strategic military concerns and economic and political crises, the modernisation and expansion of the ports were often halted.

Between the 1950s and 1960s, the Portuguese economy opened up to foreign investment, which increased as a result of its membership in EFTA. José Barreto (1993: 450) notes that "multinationals took advantage of Portugal's strategic location and low wages and taxes". During a late period of industrialisation in the 1960s, the country developed shipbuilding, cork, shoe, textile, and paper industries. With the help of Dutch and other investments, Portugal began to extract fossil fuels and gas off its coasts. During the anti-colonial wars, the port of Lisbon served as a military hub for troops and machinery, supplying the unsuccessful Portuguese repression in Angola, Guinea-Bissau and Mozambique (Lopes et al. 2007: 42). In 1974/75, the African colonies were able to liberate themselves with the outbreak of the so-called "Portuguese Revolution" which, however, cannot be seen as limited to Portuguese territory, as it was triggered by the African wars of independence (Varela 2014).

As a strategic southern European port, Lisbon inaugurated the first container terminal on the Iberian Peninsula in 1970, accompanied by a growing Portuguese mechanical industry that built cranes and winches (Dias/Alves 2010: 56). However, along with the mechanisation of the transport of consumer goods, new terminals for cereals such as soya, edible oils and edible oil plants were installed in Lisbon in the 1980s and early 1990s (ibid.).

More recently, the Chinese state has extended its logistical empire to the Portuguese nation, which had a colony in Sino-Macau until the late 1990s. Portugal is between the seventh and fourth largest investment location for Chinese capital in Europe (Le Corre 2018: 168). The Portuguese economic crisis of 2010-2014 led to a decline in foreign investment from other European states, while Chinese investment remained stable during the crisis and gradually increased after it. Compared to Brazil, Chinese companies in Portugal did not initially target primary commodities such as minerals or crops, but rather the energy and transport sectors (ibid. 169). China has increased its stake in the main electricity company and is interested in investing in the development of what is now Portugal's largest port: Sines.

Unlike Lisbon, Sines is "free from urban pressure" (Dias/Alves 2010: 60-61; Da Silva/Pereira 2020: 401). It offers large capacities to build more terminals to accommodate the growing number of ships. At the same time, the spatial possibilities of the port of Lisbon are limited due to its location on a river bay and in the capital. Portugal's most important maritime trade centre has been moving away from Lisbon since 2004, when the Singapore Port Authority (similar to the French investor Hersent at the end of the twentieth century) invested in the relatively small port in return for the right to commercially exploit the terminals it built (Garcia 2004: 2). With its container terminals, gas

production and terminals for liquids and gas from overseas, Sines has out-grown Lisbon.

The southern Portuguese port of Sines was a small fishing port until the late 2000s, when it was restructured to become the largest port in Portugal. Due to the growing need for volume in the shipping industry, larger ships require ports that are more accessible to larger ships, even if they may be more exposed to extreme weather conditions (P08 2017: item 2).[40] This trend means that ports are literally moving out of the city into the countryside. They, therefore, need new infrastructure and access. The small town of Sines is now faced with the challenge of investing in more housing for more workers in the region. At the same time, they have to respond to the ecological consequences of the expansion of the port into natural reservoirs (P 19_2 2017: item 1). The development of Sines underlines what Harvey (1990: 425) means when he speaks of time annihilating space:

A revolution in temporal and spatial relations often entails, therefore, not only the destruction of ways of life and social practices built around preceding time-space systems but the "creative destruction" of a wide range of physical assets embedded in the landscape.

Since the Singapore Port Authority built the first expansions of the port, the Singapore-owned company has had the concession to use the port and enforce Singaporean labour standards. Despite already low Portuguese wage levels, they are undermining local labour standards and are being challenged by the national dockers' union, SEAL.

Meanwhile, the Portuguese government under António Costa and the PS signed concessions with Chinese investors around 2016 to integrate Sines into the One Belt One Road strategy and build a new container terminal. The project includes the extension of the railway system from China to Sines (Leandro/Duarte 2020: 379). While the first wave of Chinese investment in Portugal was targeted at the energy sector and infrastructure, since 2018, it has taken a turn towards primary commodities. These include cork, paper (mainly produced by the eucalyptus monoculture in southern Portugal), and leather (Da Silva/Pereira 2020: 395). The Port of Sines is a possible western terminus of the longest Eurasian railway between eastern China and the Iberian Peninsula. It is also the beginning of the world's 11th largest maritime economic extra zone, owned by the Portuguese state and extending to the Azores (ibid. 400). Fossil fuels, raw ores and gas are expected to be found in the Portuguese Atlantic, while offshore wind farms could be an additional source of energy. As

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40   According to Dias and Alves (2010: 43) it took several attempts to enlarge Sines as a deep-water port and shelter it from heavy storms and high waves, including large construction accidents. Sines, in comparison to Lisbon, directly lies at the open sea and is not sheltered in a calm water bay. The disadvantage meant for a long time that the port could not be enlarged. Only the development of new technologies in land reclaiming and the processing of concrete could turn the disadvantage of the open sea position into an advantage and leave ports in sheltered but urbanised areas behind.

Chinese investors increase their trade relations with Portugal, the European state is beginning to be caught between two stools: US investors are targeting the port to increase their gas exports to Europe in order to compete with Russia and other Eastern states. In addition, the EU is increasing pressure on Portugal to limit Sino-Portuguese trade. Da Silva and Pereira (2020: 405) express concern about the growing tensions between the US and China, whose interests in Portugal could trigger a proxy or trade war. However, as a result of the Covid-19 crisis, neither of these states' representatives participated in the bidding process for the port expansion concessions in April 2021, leaving international tensions over the 50-year port concession and access to the Atlantic EEZ open for another round.

Against this background, the port of Lisbon is the second largest Portuguese primary port and is still in a position to regain economic growth, despite the loss of its historical leading position. At the same time, a lack of investment in technology such as cranes, cables, automation, etc., has limited its actual capacity (P13_1 2017: item 10).

4.1.4 Final Remarks on the History of Brazilian and Portuguese Ports

The history of Portuguese and Brazilian ports is closely linked through colonialism, slavery, and the sugar, gold, and coffee trade. The transport infrastructures of the two countries have long been geographically and historically complementary. The Portuguese Empire initially centralised economic and political power in the port city of Lisbon, and Santos was one of the decentralised outposts of Brazil's agricultural and mining economy. Its transport infrastructure mainly linked the mines and plantations to the port, but to this day, it has little satisfactory connection to the interior. Predominantly spatially sensitive primary commodities shaped the transport needs of Portuguese and Brazilian port infrastructures, combined with a global division of labour and markets between factory and field. Portugal, or rather the emerging empires of Holland, Britain, and France, were centres of global factories. In Brazil, despite specific economic developments such as the rapid establishment of the aviation industry (see Section 4.2.1) and industrialisation, especially in the urban areas of the Brazilian South, the country has never been able to fully escape its role as a "global farm" and supplier of primary commodities. This is especially visible now in relation to China. This development underlines Nowak's (2020) critical assessment of current logistics studies. It is not only consumer goods and containerisation that have accelerated the speed of global transport infrastructures but also the uneven and combined development between emerging imperialist states and sub-peripheral commodity suppliers. This relationship is rooted in the colonial past but has re-emerged in the current economic conjuncture in the current Sino-Brazilian and Sino-Portuguese relations. Histori-

cally, political and economic power shifted from port city to port city, transforming one into a critical political and economic hub. These shifts followed economic and political processes. While Salvador in Bahia was the closest port to the West African and European coasts, its port transport infrastructure was also linked to the gold mines of Minas Gerais. Rio de Janeiro became an important hub for the growing sugar trade in the early 18th century. It also concentrated the political power of the Portuguese Empire as its new capital in the early 19th century. The relatively small port of Santos became the most important and economically significant port during the industrialisation, the construction of the railway system, and the abolition of slavery, all linked mainly to the coffee boom. Today, Santos is the world's main hub for the transport of soya beans. As a result, its colonial past in terms of infrastructure still makes it one of the most important chokepoints for the food supply of the Brazilian economy and the world. However, massive investment in Brazilian infrastructure is needed to connect "neglected" areas with more vital economic areas. The high relief intensity of the Brazilian surface and the vast distances due to the country's size have been met by an extractive colonial and, since the mid-19th century, imperial economy that has been unable to restructure or reinvest in its major transport infrastructures. To this day, the port of Santos is besieged by traffic congestion, delays, increasing demand for capacity, and pressure from the Chinese state for speed.

By contrast, the port of Lisbon had lost its significance as one of the most important hubs in the history of trade when the Portuguese Empire lost its monopoly over enslaved people and maritime trade. Investments by Brazilian capitalists were reversed towards their former colonial centre. The total collapse of Portuguese colonialism with the Carnation Revolution of 1974/75 sealed its fate as a European peripheral state. Since the integration of the port industry into the European transport network, the port of Lisbon has regained some economic power. In the south of Portugal, however, a new, much larger container port has been built at Sines. It is one of the most automated and modern ports in Europe. It also has the lowest wages and the most flexible working contracts. The main investments also come from the former colonial posts of the Portuguese colonial trading network, from Singapore and China.

With the decline of the Portuguese empire and the predominant use of ports and airports in the (anti-)colonialist war for the remaining colonies in Guinea-Bissau, Mozambique, and Angola, Portugal fell far behind in its global integration in manufacturing, shipping, and civil aviation. During the European crisis in 2009, capital from its former port network and colonies in Singapore, Angola, China, and Brazil returned as foreign investment to take over part of the banking sector, civil aviation, and port industry (Le Corre 2018: 170).

However, the reasons for Santos, Lisbon, and finally Sines becoming chokepoints are very different. While the Brazilian port of Santos is suffering from a lack of investment in its land transport infrastructure as the pressure to

export soya increases, Lisbon has seen a decline in investment in the port infrastructure itself. As a result, it has been affected by the internal contradictions of a port in economic decline but still significant enough to have a growing container throughput. Further expansion of Sines depends on improved rail links to the Euro-Asian railway. It depends on how the Portuguese state and its government apparatus navigate the tense relations between the EU, China, Russia, and the United States. International imperialist tensions could threaten its development.

4.2 An Economic History of Brazilian and Portuguese Airports

Compared to ports, (historical) studies on airports, especially on labour relations, are still rare. The following section attempts to fill this empirical gap in transport studies. It begins with a brief (colonial) history of the beginnings of aviation in Brazil, tracing the development of Brazil's first civil airport, Alberto-Santos Dumont, to the present day. It then discusses the emergence of Portuguese military and civil aviation and the construction of Lisbon airport. The section then examines why Alberto Santos Dumont and Lisbon Airport are considered chokepoints and how they differ from coastal chokepoints.

4.2.1 Neo/Colonial Traits of Aviation in Brazil

According to Thomas Hippler (2017: 70), aerial bombardments had been a feature of colonial military strategies around the world for several years before they entered European soil during the First World War. They are the material evidence that the air is as dominated by capitalist power relations as the earth and the sea. Aviation brought a new scale and speed to warfare. Aerial bombardments allowed colonising forces, in particular, to terrorise occupied territories without a proper knowledge of the terrain. In addition to suppressing anti-colonial struggles, the battles between the imperialist powers can now be moved away from borders and the battlefield, and warfare can be transferred to the area of the entire population.[41]

The priest and mathematician Bartholomeu Lourenco de Gusmão, born in the Brazilian port city of Santos, constructed the first known manned lighter-

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41   But there is also a class division in aerial bombing. Since airstrikes frequently aimed at triggering revolts, especially working-class neighbourhoods were targeted since they were more "densely populated than the bourgeois quarters" and the working class has been seen as the "least integrated part of the population politically"; see Hippler (2017: xvii–xviii).

than-air object before travelling to Portugal, where he studied mathematics. In August 1709, he presented his airship, a balloon, to the Portuguese court in Lisbon. It flew more than four metres high before bursting into flames and being destroyed (Benkoe 2002: III). While King João supported Gusmão's studies, the Church accused him of heresy, the consequences of which he escaped by fleeing to Spain (ibid. 67). It is no coincidence that one of the first studies of manned balloons was carried out in the Portuguese Empire. In de Gusmão's petition to the King of Portugal to support his research, he praises aviation in the following terms:

… [N]ews of greatest importance could be delivered to our armed forces and the remotest countries almost as fast as the decision to be taken … In addition, your majesty can order the treasures and resources to be shipped much faster and safer. Also, businessmen could send bills of exchange with the same speed. All places in a state of siege could at any time be provided with soldiers and ammunition as well as with food and one could free any number of people and the enemy could not do anything against it. One will discover regions which are closer to the poles of the Earth and the glory of this discovery will be accounted to the Portuguese nation and not to foreigners who have striven for it in vain. One will discover the correct geographical longitudes of the entire world which – since they are wrongly indicated in many nautical charts – have caused many shipwrecks. (Benkoe 2002: 8)[42]

This quote, written two hundred years before aviation took off, gives a realistic picture of aviation's role in capitalism.

What was behind the empire's interest in improved, or even flying, transport? During this period, gold was discovered in Bahia and other regions of Brazil, and the Portuguese Crown sought to increase its control over the colonial territory, as the gold flows initially allowed the empire to balance its trade with Britain and other states (Fausto/Fausto 2014: 49-50). This development was probably what de Gusmão was referring to when he spoke of "treasures and resources being shipped much more quickly and safely". Moreover, the colonial territories over the sea were characterised by large uncontrollable spaces and borders. One expression of this was the emergence of the *quilombos* in the Brazilian rainforests and later along the coast. These regions were initially havens for indigenous people fleeing invading troops and the threat of enslavement. Later, the quilombos were frequented by escaped former African slaves who developed a subsistence economy to survive. Several hundred quilombos were later established in the mountains and on the coast near emerging capitalist centres such as the port of Santos, to allow for some degree of commercial exchange or wage labour (Graden 1996). It was from these areas that the labour force for the docks was later recruited, to this day. These regions, which de Gusmão described as "under siege", had to be "supplied with soldiers and ammunition". On the eve of the eighteenth century, when de Gusmão was invited to present his invention, the Portuguese crown and its

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42   See also for a detailed study on the beginning of aviation in Brazil the work of Leonie Schuster (2022).

army were torn between external battles on the borders of the Latin American colony against Britain, France, Holland and Spain, on the one hand, and internal conflicts over control of the extraction of precious metals and the autonomous territories of escaped former slaves, on the other. Gusmão's ideas for revolutionising transport technologies were, therefore, a reflection of this tense political and economic period. The military and financial implications he outlined in his petition to the King of Portugal have shaped the development of the aeronautical industry ever since.[43]

Religious suppression of theories dedicated to aviation may have been less prevalent in the French colonial empire, which supported the first successful construction of balloons and dirigibles in the late 18th and early 19th centuries, probably for similar reasons as the Portuguese Crown. Alberto Santos Dumont, the son of the aforementioned Brazilian railway engineer and "coffee king" Henrique Dumont, emigrated to Paris in the late 19th century to study aviation and benefited from the theories and experiments of his French mentors. Santos-Dumont became the first pilot of a stable dirigible, which he used to circle the Eiffel Tower in 1901. Again, his role in the pioneering of dirigibles and later heavier-than-air vehicles was no accident. Coming from a family of engineers and coffee plantation owners in vast Brazil, he was aware of the economic pressures to conquer space. As a result, he supported the development of the necessary technologies. Unlike de Gusmão, however, he opposed the use of aeronautics as a means of military intervention.

In general, the early development of aviation in the independent Brazilian state was an attempt to overcome the colonial infrastructure legacy. The large areas of the country are linked to a fragile and extractive transport infrastructure, economic weaknesses in the hinterland, and enormous distances, which hindered the extensive construction of internal railways and motorways. Airports and aeroplanes fix less capital, and aviation can control inland areas and borders (Paludi 2017: 153; Olivares/Piglia 2019: 3). This role in spatial and territorial control underlines that the development of transport infrastructure cannot be sufficiently explained within the borders of a state and the framework of a formal comparison. It must be historically and spatially traced back to its (violent) roots: the emergence of capital accumulation and the development of transatlantic trade.

At the same time as, if not before, several European countries and Latin American governments supported the construction of railways and, later, airports. Flying was seen primarily as a political strategy to control and secure the borders and trade of the continent's large countries. From before the Second World War until the 1960s, in several Latin American states, such as Brazil, the installation of aviation as a regular infrastructure was accompanied by a conflict of different neocolonial ambitions between European states, such as

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43 I t is not surprising, therefore, that the term "civil" was added to aviation only later, as aviation itself was initially considered to be exclusively a military infrastructure.

Germany and France, on the one hand, and the United States on the other (Cushman 2006: 177). In addition, the Brazilian state sought independence from both sides. The German "Condor Syndikat" (a subsidiary of Lufthansa), based in Berlin, was the first company to obtain a concession from the Brazilian Ministry of Transport and Public Works. It was allowed to establish two regular commercial air routes between Rio de Janeiro and Rio Grande and between the city of Rio Grande and Porto Alegre.

Moreover, the first Brazilian airline, VARIG, founded in Porto Alegre, was headed by the German pilot and entrepreneur Otto Ernest Meyer (Giannotti 1995: 10-11).[44] The US Pan American Airline (PAA) successfully acquired several Latin American airlines, which were early joint ventures between local (Colombian, Argentine, Brazilian) and European (French, German, British) investors (Paludi 2017: 93). These included the Brazilian airline Panair, founded in 1930, which became a subsidiary of PAA and for a long time was part of one of Brazil's most famous airlines. VARIG and Panair reflected an ongoing neocolonial conflict between the imperialist forces of the USA and Germany. In 1943, VARIG stopped buying aircraft from Germany and shifted its contracts to US aircraft (Giannotti 1995: 10-11). In the 1960s, the Brazilian government invested in a state-owned aviation company, later known as Embraer, in order to become less dependent on the US aircraft market. Today, Embraer is one of the largest aircraft manufacturers in the world and the only global aircraft manufacturer from an emerging economy (Ross Schneider 2009: 167-168).[45]

As air links developed, airports began to appear, particularly along the coast. Early airports were exclusively mono-modal hubs, "oriented around the flying machines" (Urry 2012: 137). They were fixed capital, comprising straight, long runways, ground control facilities and technologies to enable planes to land and take off safely. Compared to ships, aeroplanes obviously cannot "anchor" far from land. However, speed and gravity force the infrastructure to support the arriving or departing vessel from take-off to landing. Airport infrastructure is very different from ports, although similar terms are used (gate, terminal, air-shipping).

A map of early airports by Mariana I. Paludi (2017) shows the imprint of military and extractive (neo)colonial patterns of infrastructure. These airports were built for commercial cargo transport and surveillance, largely funded by US capital, along the Brazilian coast, with only a few connections into the Am-

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44   Short for (Sociedade Anônima Empresa da) Viação Aérea Rio Grandese.
45   Since the early 2000s, Embraer has invested in a production line in China and bought a
      majority stake in the formerly Portuguese-owned maintenance and aeronautics company
      OGMA. Despite Embraer's privatisation in the 1990s, the company still has strong links with
      the Brazilian Air Force and purchases military aircraft for the executive branch of the state.
      In addition, Embraer's ownership of a large share of the Portuguese company OGMA has
      broadened its market access to the European military aircraft sector (Amann 2009: 207-208).

azon. According to Paludi (ibid. 146), the PAA supported the construction of more than 50 airports in different areas of Latin America by the end of the Second World War. The military and commercial interests of the United States and the regional states were closely intertwined. In 1939, the US War Department invested in the "Belem-to-Rio route" to access Manaus, with its "shipping port in the Amazon Forest", where it was possible to extract "rubber, Brazilian nuts, fibres, medicinal plants and snakes" (ibid. 110-111).

In addition, the Brazilian government "sponsored Panair do Brazil (linked to PAA/PanAm) to speed up the traffic of the diamond business", as in the 1940s Brazil was the largest supplier of diamonds after South Africa (Paludi 2017: 144-145). Civil aviation and tourism were able to impose their infrastructural interests on the location of airports. However, colonial history and military and economic interests took the lead in imposing aviation infrastructure on spaces that would later lack the capacity to expand for the new emerging commodity: the changing location of commuters and tourists.

Today, the colonialist pattern of extraction is still dominant in Brazil: The majority of high-frequency airports are located in the colonial cradle of the state, on the coastal line with Salvador de Bahia, Sao Paulo and Rio de Janeiro (the last two concentrating 65 per cent of passenger traffic in their airports) (Paula Balan et al. 2020: 17).

4.2.2 The Airport Santos Dumont

In 1938, Brazil's first civil aviation airport was established in Rio de Janeiro, named after the Brazilian aviation pioneer Alberto Santos Dumont. At the time, Rio de Janeiro, the state capital, served as Brazil's political and economic centre (Dias 2019: 310). In the 1950s and 1960s, Latin American states nationalised their airlines, such as "Compania Cubana in 1954, Aeronaves de Mexico in 1959 and Panair do Brasil in 1961". As a result, they weakened the position of US influence in their regional aviation infrastructures (Paludi 2017: 13).[46] Until the nationalisation of Panair do Brasil, Alberto Santos Dumont Airport (SDU) was the country's main airport, but this changed as the demand for larger aircraft and the number of ships increased. SDU was built near a military airport further inland, on the coast of Rio de Janeiro, with a runway directly on the shore of the bay, with little capacity for expansion (Dias 2019: 312). In 1957, Galeão Airport was inaugurated, becoming the largest airport in terms of area. It replaced SDU in Rio de Janeiro as the leading international hub (ibid. 312).

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46   According to Vito Gianotti (1995: 10-11), Panair was not directly nationalised, but it was effectively driven into bankruptcy by state subsidies to VARIG in the 1960s and a public call to boycott the company which also targeted the well-organised aviation and airport workers at Panair.

SDU is currently the 6th largest airport in the country, serving mainly as an inland airport with important connections to São Paulo and Brasilia. As such, the airport handles the arrivals and departures of politicians, government officials, and businessmen who commute, sometimes daily, between Rio de Janeiro and either Sao Paulo or Brasília.

While the 1970s saw growth in the Brazilian airline industry, the economic crisis of the 1980s slowed the sector down. Various neoliberal Washington Consensus policies, such as the privatisation of Embraer and regional airlines in the 1990s and early 2000s, brought mixed results. While Embraer expanded and survived due to its strong ties with the Brazilian Air Force, flagship airlines such as VARIG, Panair, Cruzeiro do Sul, VASP, and Transbrasil lost market share. They went bankrupt, including the devastating effects of job losses for their predominantly female employees (Castellitti 2019: 83). In the same period, the deregulation of the Brazilian civil aviation market facilitated the emergence of low-cost carriers such as Gol (2001) and Azul (2008), which followed global expansion strategies (Paula Balan et al. 2020: 15). In 2014, the owner of Azul, a US-Brazilian entrepreneur and pioneer of low-cost airline experiments, bought the majority of the shares of the Portuguese flag carrier TAP. The company had been privatised between 2010 and 2014 as part of a major neoliberal shift in the Portuguese state in the wake of the crisis. However, when the global economic crisis hit Brazil, Azul sold more than 20 per cent of its shares to China's HNA Airlines group.[47]

Between 2010 and 2014, the lack of spatial capacity at Brazil's 20th busiest airport was attributed to the increase in passenger traffic and delays associated with the upcoming mass events: the World Cup and the Olympic Games in 2014 and 2015 (Condé 2011: 163; Urry 2012: 142; Vasigh et al. 2014: 41-42). This has led to the automation of handling and check-in services. While automation has destroyed jobs in aviation, the transformation of the sector has created new and more precarious jobs. As a result of demographic changes in society and the falling price of air travel, one of the services that has seen a massive increase in recent years is the transport of people with special needs. Along with the emergence of the commodity change in the location of people with special needs, a new sector of social assistance grew up at the airport, comprising predominantly female and/or black and brown workers with precarious part-time contracts. In 2017, Santos Dumont Airport became a battleground during the general strike against the labour reform and President Temer's government, using the airport's strategic role in transporting businessmen and politicians as a means of resistance (B 41_4 2018: item 56).

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47 See Stefan Eiselin (2015): HNA - die chinesische Etihad. Aero Telegraph, https://www.aerotelegraph.com/hna-die-chinesische-etihad-kauf-anteil-azul [Access: 07.09.2020].

4.2.3 Portuguese Aviation: from Colonialism to Neoliberalism

The initial history of the Portuguese state did not depart from the original traits laid out by de Gusmão when he addressed the Portuguese Court at the beginning of the 18th century. Despite its early contact with the ideas of military aviation, Portugal entered the civil aviation market relatively late. Like other imperialist states on the European continent, the first and foremost Portuguese interest in aviation was linked to overcoming the fragility of its control over the remaining colonies. Inspired by French engineering in aviation (among others by the flights of Alberto Santos Dumont in Paris) and the installation of French military aviation, in 1912, Portugal purchased its first three military aeroplanes from Britain and France (Neves et al. 2015: 1-2). At the same time, other imperialist states, such as Germany and Italy, had already prepared their first fleet of dirigibles and heavier-than-air machines for the colonial struggles and the First World War. In the 1920s, Portuguese pilots crossed the Atlantic and made several attempts to fly around the world. However, the history of Portuguese aviation by Neves et al. (2015: 3-4) does not mention the peculiar map used by the Portuguese pilots of the famous first transatlantic flight and the flight around the world: All the regions chosen for stopovers were mainly former or still existing Portuguese colonies (ibid.); be it Macau in China, Goa in India, Angola, Guinea or Rio de Janeiro in Brazil. Portuguese historiography is mainly concerned with Portuguese "heroes" in the history of transport but not with colonialism and the associated oppression of different populations.

In 1961, Portuguese military aviation joined forces with the South African and French colonial powers in anti-colonial struggles in Angola, Guinea-Bissau, and Mozambique. These armies had recently gained experience in oppressing other African populations (Cann/Correia 2017: 311). In the 1970s, commercial and civilian aircraft were acquired, transforming the national civil airline TAP, founded in 1946, into a military wing of the colonial war (Venter 2018).[48] The Portuguese state eventually lost the battle with the development of the Carnation Revolution in 1974/75, when most of the colonised regions gained independence.[49]

Civil aviation developed very slowly in the country. As part of NATO, the Portuguese Air Force continued to dominate Portuguese aviation. However, with the revolution of the 1970s, the flagship airline, TAP, was nationalised

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48   The founder of TAP was Portuguese air force general Humberto Delgado, who initially supported the right-wing Estado Novo dictatorship of António de Oliveira Salazar, but later turned against the military regime and was assassinated in 1965 by Portugal's secret police, the PIDE. His name regained prominence when the centre-left Portuguese government renamed Lisbon's airport Humberto Delgado Airport (LIS) in 2016, while renationalising the majority of shares in the national airline TAP.

49   Macau remained a colony until it was returned to China in the late 1990s, while Madeira is still part of the Portuguese state, despite some regional autonomy.

and transformed into a civil airline with main routes between Lisbon and Madrid, and later Lisbon and Latin America. At the same time, other airports were opened in the north and south of the country. Especially after the economic crisis between 2010 and 2014, Portugal turned its tourism sector into a major asset, using Airbnb platforms and other formats to attract tourists. Passenger traffic grew enormously during this period. TAP vacillated between full privatisation in 2015 and partial renationalisation in 2016 and 2020, with the government currently holding a 72.5 per cent stake in the company. The Brazilian airline was the main owner of TAP between 2015 and 2020. In 2020, TAP was fully renationalised due to the Covid-19 crisis and a government bailout.[50]

4.2.4 Humberto Delgado Airport from Colonial War to Mass Tourism

Lisbon Airport in Portugal was inaugurated in 1942, at the height of the Second World War (Coutinho/Rosário Partidário 2011). At the time, it played a similar role to the port of Lisbon: it served as a strategic hub for the movement of diplomats, refugees, prisoners of war, munitions, food and machinery from all sides of the conflict. From the 1970s, when passenger planes were requisitioned for the colonial war, the airport was mainly used as a military space to send troops to Angola, Guinea-Bissau, and Mozambique to defend the remaining Portuguese colonial states in the anti-colonial war that broke out after the Second World War.

In 1973, nine months before the Carnation Revolution, Lisbon airport became the battleground for a pre-revolutionary strike by independently unionised TAP machinists and airport workers, as discussed in section 9.3.5. They used the airport as a meeting place and clashed with the militarised forces of the state, effectively blocking the movement of medicine, troops, and material to the front (P18_03 2017: items 1-3). Among the leading activists were workers who decided to become system-relevant aeronautical machinists in Lisbon in order to avoid being sent into the violent colonial war (ibid. item 1).

Today, due to the massive growth of the Portuguese tourist industry, Lisbon's annual passenger traffic is higher than that of Rio de Janeiro's domestic airport, SDU, despite the air bridge with São Paulo. Lisbon opened a metro line to the airport only a few years ago. The airport is located outside the city centre and has long been accessible only by car, not by public transport. Flying was originally a form of travel only for the rich (Lyth 2016: 179). Now, low-cost airlines are making flying accessible to a wider population, creating new needs for cheaper infrastructure and transport for the wider population to get to the airport. Today, LIS airport is one of the 20 largest airports in Europe and

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50 See Orban, André (2020): Portugal re-nationalises TAP Air Portugal. Aviation24, https://www.aviation24.be/airlines/tap-portugal/portugal-re-nationalises-tap-air-portugal/ [Access: 07.09.2020].

has seen a massive increase in passengers due to Portugal's huge investment in tourism. Following this development, there have been several expansions of the runway, the opening of a new terminal, and an ongoing debate about the construction of a second airport to serve the influx of tourism to Lisbon (Gonçalves/Marreiros 2014).

During at least three of the one-day general strikes between 2010 and 2013, LIS was "choked" by labour struggles, as the locally organised ground handling workers and the local firefighters (almost traditionally) set up the first picket line of the day at Lisbon airport. Between 2014 and 2015, the airport was linked to the struggle against the privatisation of TAP. In the years that followed, the social workers whose numbers grew in a similar way to those in Brazil joined the various efforts of other ground handling workers in struggles against precarious and unsafe working conditions.

4.2.5 Conclusion on Aviation

Airports have evolved from hubs of military and commercial aviation to spaces dominated by the control of the circulation of goods and the movement of people. While freight transport of time-sensitive commodities is still growing, the transport of the commodity of change in place itself, such as the transport of people, is also growing. In Brazil and Portugal, aviation initially served the military purpose of controlling the vast political and socio-economic spaces created by colonialism and the extensive cultivation and mining of raw materials. It was not until the second wave of airport construction that aviation was increasingly used by "civilian" passengers and for the growing mass tourism.

Despite the apparent "free nature" of aviation, it is clear that aviation has primarily followed the path laid down by colonial and neocolonial history. The first airports in Brazil and Portugal were located near the main central ports. The first airlines connected political and economic centres such as Lisbon and Madrid, or inland production centres such as rubber production and diamond mining in the Brazilian city of Manaus in the Amazon, with Belém. The vast spaces accessed and conquered by ships and militarised ports needed the speed technology of aviation to control them under an exploitative capitalist system.

At the moment, similar to ports, Brazilian and Portuguese airports are being studied, particularly in business studies, as being too small and in need of expansion. These processes are still ongoing. In Portugal, a new airport near the centre of the capital has been inaugurated to solve the problem of congestion. One of the reasons for this is the growth of low-cost carriers, encouraged by various Open Skies agreements, which, in Brazil in particular, have destroyed national airlines such as VARIG, TAN, Panair Brazil and others, and led to new mergers of regional companies. SDU was Brazil's first airport for civil

aviation, and its low capacity led to a "movement" of civil aviation to another, larger airport, allowing Rio de Janeiro to have an airport for international or domestic flights. In comparison, LIS was enlarged. The project to "move" the airport out of the city or open a second facility has only been realised recently as the state's economic situation had been obstructing such developments before. Both airports – SDU and LIS – are political and economic chokepoints as their lack of capacity slows down transport and elevates the risks of delays. In this way, they have become susceptible to disruptions by labour struggles.

While the influence of China's supply chain empire is evident in the port sector in Portugal and in the transport of primary commodities in Brazil, it is less evident in the airline industry. However, China has increased its investment in airlines such as Azul, which held shares in TAP. China has also increased air traffic between Beijing and Lisbon and Brazil's economic centres.

In aviation, as in shipping, the history of the industry is also the history of its workers. The increasing automation of check-in and handling has destroyed many jobs. In Portugal and Brazil, the development of low fares and low-cost airlines has led to an increase in the number of passengers with special needs and, therefore, in the number of special/social assistance workers at airports, who in both cases are mostly part-time and on short-term contracts. As in the ports, despite the massive increase in automation and a remote workforce of IT workers and engineers, there is still a large group of manual workers in the cargo and handling sector. And there are manual workers in the social assistance sector and a precarious workforce of call centre workers who have to track down lost luggage or explain online check-in. All tasks are planned to be fully automated or directed to the customer.

In contrast to ports, airport services are dominated by female workers and are subject to patriarchal forms of oppression. While women work as cabin crew or on the ground, it is predominantly white male pilots who fly the planes or work as managers in the airlines. Behind the long shopping floors and tidy waiting halls, workers of colour drive the planes, carry the luggage, clean the toilets, or fill the fuel tanks, as will be discussed in more detail in the following chapters.

4.3 Final remarks on the History of Portuguese and Brazilian Chokepoints

This chapter explored the intertwined spatial histories of four Portuguese and Brazilian chokepoints. I demonstrated how Marx's concepts of transport and communication theory can be used to perceive the role of logistics in capitalism. A historical materialist analysis, combined with a focus on critical logistics in warfare, underpinned the study of contemporary chokepoints in Bra-

zil and Portugal. I explored how chokepoints are historically, economically, and socially interconnected. This entanglement of trade, logistics, and warfare shows that states, not corporations, were involved in logistical concerns, especially in the early days.

According to van Laak (2018: 140-141; own translation [AE]), infrastructures are colonial "reservoirs of power" for (former) European imperialist states. They have long -established asymmetrical dependencies that persist despite formal independence. Therefore, the offer of infrastructure investment by British and French companies, and later by the United States in Brazil and Portugal, can be seen as a neoliberal practice to physically reshape and deepen infrastructural and logistical dependencies. As Jennifer Hart (2014: 187) concludes, historical infrastructural patterns "in which both labor and resources were concentrated in the extractive structures of the colonial state" limit economic growth in formerly colonised states.

Yet, if one looks back at the history of transport between Portugal and Brazil, it is as if a Portuguese feudal ruling class left Europe by ship, and 500 years later, a Brazilian capitalist class returned to the country by investing in planes and airlines. The reversal of colonialist traits takes place mainly in logistics and infrastructure projects. To a lesser extent, Brazilian capital, and to a greater extent Singaporean and Chinese capital, are taking refuge in buying and building infrastructural spaces such as ports and airports, or buying into logistical sectors such as airlines and shipping companies. This aspect has been less explored when discussing the spatial fix of capital and uneven and combined development. The networks that link them all are the capital-intensive services of passenger and freight transport. In Europe, the ports of Piraeus in Greece and Portugal, among others, have become spaces of inversion of colonial capital relations. China's One Belt One Road project is the best-known example of how developing countries are using the new global role of the transport sector to emerge and control economic trade flows and global value chains. In this way, transport has become the sector in which emerging economies can gain global space for capital and temporarily surpass the joint former colonial powers and imperialist nations. However, as analysed for the Brazilian transport structure, fixed capital and the historical paths in which infrastructures were built cannot be easily erased. Thus, they become an increasing burden for new sectors such as civil aviation or in the case of changes and increases in certain commodity exports.

Thus, chokepoints in Portugal and Brazil are not only spaces where intermodal transport slows down the circulation of goods and people, but they are also the consequences of spatial-historical processes driven by capital accumulation, which constantly collides with its own spatially memorised past.

5. The Social Reproduction Metabolism of Embodied Labour

Not last, Marx did not realise that the work of the inspectors and reformers he so often quoted in Capital was not an idle, hypocritical exercise but was part of a process of reconstitution of the proletarian family – with the introduction of the family wage, the gradual expulsion of women from the factory and the beginning of an investment in the reproduction of the workforce that would go a long way to pacify the working class as well as stimulate a new form of capitalist accumulation. Through this move, capital was able to dispel the threat of working class insurgency and create a new type of worker: stronger, more disciplined, more resilient, more apt to make the goals of the system his own (Federici 2018: 472).

The following chapter looks at the role of workers' bodies in transport logistics and the embodied experience of history and current forms of exploitation and segregation at chokepoints in Brazil and Portugal.

The chapter begins with a literature review of labour studies in transport from an industrial relations perspective and the lack of a concept of the labouring body and social reproduction. It then discusses Social Reproduction Theories, which approach the making of the labouring body in terms of class position, exploitation, a temporal, and spatial dimension to illustrate the material processes that create and shape workers' labouring bodies throughout the history of capitalism and workers' lives. I then propose a materialist conceptualisation of the labouring body. I reflect on the vertical and horizontal, racial and gender segregation, and precarious exploitation, in and between maritime and air transport. The chapter aims to understand the economics and politics of chokepoints, their role in the governance of workers, their labouring bodies in the transport sector, and why this leads to or obstructs particular struggles around the metabolism of social reproduction. Therefore, in the last part, I operationalise the spatio-historical categories along gendered, racialised, and precarious exploitation patterns. In the following chapters, I will apply them to workers in the Brazilian and Portuguese maritime and aviation industries.

5.1 Connecting Marxist-Feminism to Industrial Relations

This chapter is based on the assumption that two analytical gaps characterise industrial and labour relations studies. First, the role of female or migrant workers in struggles is still portrayed as "new" or "special", linked to a limited perception of labour history to the short and very dominant post-war period in the specifically Western industrialised world (Moody 2017: 20). There is a narrative in industrial relations that portrays the agent of class struggle as a predominantly white male worker (Brandon et al. 2019: 4). In short, this per-

ception is linked to the idea that in the 19th and early 20th centuries a male-dominated labour movement was the only force in class struggles. With the emergence of the so-called "New Social Movements" (NSM) in the 1960s, social conflicts won equal rights for all genders and people of different backgrounds; the working class changed (Calhoun 1993: 390-391). It challenges trade unions in terms of who they organise and how they organise (Hyman 2002: 8-9).

However, if we look at different times and political and economic spaces, we can see that issues around the "NSM" are far from new, be it women's rights, struggles against racism and slavery, ecological depletion and destruction, or feminism. These struggles have stood alone, been part of, or shaped labour movements (Calhoun 1993: 389; Linebaugh/Rediker 2007: 169; Federici 2014: 22; Patel/Moore 2018: 74). Trade unions have often been challenged to integrate different corporate and social groups into their organisations and strategies (Koch-Baumgarten 1998: 271). Questions of inclusion and exclusion in and from the labour market or political and trade union structures are as old as the capitalist state and the global labour movement (Linebaugh/Rediker 2007; Federici 2014; Patel/Moore 2018; McNally 2020). These contradictory processes unfold embedded in conjunctures of social struggles, specific socio-political and economic dynamics, and developments between and within capitalist state apparatuses. There is no coherent history in which women, LGBTQI*, disabled or migrant people have been excluded from wage labour. It was only with the support of the "NSM" from the 1960s onwards that they forced their way into the labour market. On the contrary: The history of transport labour, as shown below, is rich in examples of the inclusion/exclusion of, for example, women, black, and disabled people. The narrative that the dominant white male labour movement has only recently been challenged by workers with other incorporated and social characteristics obscures a number of crucial struggles and economic shifts. It also obscures the responsibility of state apparatuses and trade unions in the process of excluding or including women, disabled, migrant, LGBTQI* workers from or into the labour market through specific labour laws, norms, and certain misogynist or racist campaigns.

The second gap in trade union and labour research on industrial relations is the marginal or absent analysis of the social reproduction of labour and the impact of work on the labouring body. The central part of the research on industrial relations and conflicts partly runs the risk of making the worker an extended part of the labour process. It neglects the analysis of the sphere of reproduction and its effects on workers. For example, in the important work of Peter Turnbull and his co-author Geraint Harvey (2000a; 2000b; 2010; 2015; 2019; 2020), recent labour struggles and political and economic outcomes in the European dock and air transport industries are treated in a somewhat functional way. People are discussed as dockers, union members, and activists, but

not in relation to their physical and reproductive side. The impressive works of Edna Bonacich and her co-authors Jake Wilson and Juan de Lara (2003; 2005; 2008; 2009; 2009) also analyse the impact of the logistics revolution on logistics workers. However, the authors largely overlook the reproductive sphere of workers, thus obscuring a crucial part of these activists' lives.[51]

I would also like to highlight studies that indirectly incorporate a perspective on social reproduction and the labouring body. Bensman and Jaffee's (2016) work on truck drivers and warehouse workers depicts the ecological impact of the logistics industry on black and working-class communities, and foregrounds health and safety issues as relevant reasons for struggle and reach out to workers' communal reproductive spaces. In addition, Kanngieser's (2013: 595-597) powerful work "Tracking and Tracing" explores the bodily effects of technologies such as RFID and "voice-directed picking" in warehouse work, drawing on a Foucauldian lens through which "bodily mobility" is observed and controlled in a network of machines. In addition, Carolina Castellitti's (2019) remarkable work explores bodily inscribed work patterns and racialised and gendered power structures. She focuses on the Brazilian airline sector during privatisation, Open Skies agreements and the subsequent dismantling and restructuring of Brazilian airlines. In addition, Boewe et al.'s (2021) study of the transnational struggle of Ryanair cabin crews in Europe contains essential features about the lack of reproductive time and affordable housing at the place of work. The authors also link this to the uneven economic development in the Eurozone, which allows for the recruitment of young, well-educated workers from the European periphery.

A decent conceptualisation of the body, the reproductive sphere, and the capitalist state intervening in the port, the warehouse, the airlines, labour laws, and social reproduction is implicit in all these crucial works. Despite a neat analysis of muscular impairments, injuries, legislation, and legal conflicts, the role of reproductive sites, hospitals, households, charities, childcare facilities, etc., of the people who will or will not maintain, heal, and care for the impaired, tired, or hungry body, is left out. Moreover, labouring bodies become functional categories, as labour struggles are often measured by whether they have "solved" the wage/hours conflict in the medium or long term and brought about pacification. This functional categorisation of labouring bodies as successful or unsuccessful does not take into account that capital accumulation consists of two completely contradictory components: capital and (bodily) labour. The conflict cannot be resolved under capitalist conditions, but the struggles around this contradiction are contained and institutionalised/"crystallised" unless the capitalist totality is transformed or dismantled.

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51   See for example: Apicella (2016); Boewe and Schulten (2017); Dietrich (2017); Kassem (2024).

What follows is a discussion of the labouring body along the lines of Social Reproduction Theory, which has the potential to fill the above gaps in critical political economy and industrial relations.

5.2 The Body from the Lens of Social Reproduction Theory (SRT)

Human geography and materialist feminist approaches such as SRT,[52] which have been decidedly concerned with the body and the commodification of reproductive labour, are helpful in re/embedding the labouring body within a broader political economy analysis of reproduction and working conditions (Fracchia 2005; Orzeck 2007; Bruff 2013; Federici 2014; Rioux 2015). This section introduces Social Reproduction Theory and the production of the labouring body through four concepts: class position, exploitation, temporality, and spatiality.

As I said earlier, Marx examines the process of capital accumulation within the spheres of production, exchange, distribution, and consumption. The latter, the consumption of commodities, is important in the sphere of production, which consumes raw materials, machinery, and labour to produce commodities. In addition to consumption in the production sphere, private consumption is also relevant to the turnover time of capital, especially when it comes to crises of under-consumption and over-accumulation. Luxemburg emphasised that the key response to the expansion of capitalist markets lies in the growing distance between production and consumption (Luxemburg 2004: 413). Increasing spatial distances lead to social, economic, and political divergence (Wissen/Naumann 2008: 384). Marxist-Feminists have stressed that private consumption of commodities, insofar as it is linked to the reproduction of labour, plays an indirect but constitutive role in the economy. It recreates variable capital: Food and clothing bought as commodities through wages paid in exchange for labour (Marx [1850-1859] 1967: 815) must be cooked and maintained through paid or unpaid domestic labour. The consumption of commodities is linked to social reproduction because social reproduction is linked to production, distribution, and exchange.

However, as Verónica Schild (2019: 27) points out, Marxist-Feminists discarded the idea of reducing social reproduction to the sphere of consumption. As I show in the thesis, social reproduction is not spatially confined to the

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52   I refer to SRT, which follows the path of Ferguson and others who argue that reproductive labour does not directly produce surplus value. For more details on the various debates and trends in SRT, see Ferguson (2016); Bakker and Gill (2019) and Mezzadri et al. (2021).

household or the space outside of production. Breaks to rest legs, eat, chat, and breathe fresh air are also part of the social reproduction of workers' bodies. In addition, hospitals, canteens, kindergartens, leisure centres, parks, and much more enable their reproduction. As with unpaid domestic work, these low-paid care jobs are predominantly occupied by women. Public enterprises, in particular, are part of the state apparatus and thus integrate the role of the state into the social reproduction of the body. Schild (2019: 27) summarises that social reproduction

… [E]ncompasses not only the relationships between households and workplaces but all institutions and processes through which labor power is renewed.

At a broader and more abstract level, the worker is produced in a "double sense, through biological reproduction and as a carrier of labour power" (Bhattacharya/Ferguson 2018). Social reproduction takes place along two different timelines: As the historical creation of the bearer of labour power through the birth of a human being and its body; and as the daily reproduction of the tired, hungry, sad, injured, depressed, dirty, worn-out worker through feeding, healing, resting, caring, cooking, cleaning, and so on.

Social Reproduction Theory provides a lens through which to see capital accumulation from the point of view of these worn-out and reproduced workers and their needs, desires, thoughts, and possibilities for resistance beyond the workplace. The theory integrates the social sphere into the workers' making of the causes of grievances, embedded in the social whole of capitalism, without neglecting the workplace of the sphere of production.

5.2.1 Class Position

Labouring human bodies are indispensable to the production of use value and the capitalist transport system. Compared to logistics or the state, the body is the most concrete level of abstraction. At the same time, it is the concrete material reality of the real abstraction of the working class. It is the entity that allows us to think, move, and rest. However, not all bodies are "labouring bodies" in the sense that I want to put here: as part of the working class.

The working class has often been defined, most notably by Max Weber, in terms of income levels, e.g., the price paid for their labour in the market (Barker 2008: 1). This definition suggests that the class associated with a particular income group can gradually move up or down with higher or lower wages. However, as Kim Moody (2017: 8) aptly puts it, "classes in capitalism are relational in nature, not simply uncomfortably stacked on top of each other". According to the Marxist-feminist ontology in Chapter Two, classes are internally related processes and largely interdependent. The position in the production process defines the class to which a person belongs (Poulantzas 1975: 13-24; Gallas 2016a). The relationship between the two dominant

classes (the possessing and the dispossessed) depends on the mode of production: can the dispossessed make a living? Are they owned by others, landowners, or forced to sell their labour? Classes have existed and continue to exist in different modes of production where the means of production are concentrated to a greater or lesser extent in the hands of a few. From the beginning, capitalism has used not only wage labour but also other ways of extracting surplus labour, such as slavery, unpaid domestic labour and the violent appropriation of nature (Patel/Moore 2018: 21). However, capitalist dispossession and extraction are comparatively higher and of a different quality than in other class societies. The commodity of labour power, sold in exchange for wages, remains dominant in capitalism. As Harvey (2014: 39) points out, the main terms of the contract between capitalist and worker are that "whatever the worker produces" belongs to the capitalist, who also has "has the right to direct the work, determine the labor process, and have free use of the capacity to labor during the hours and at the rate of remuneration".

As will be discussed later, the capitalist is still not free to use the worker's body in any way he chooses. Workers do not sell their bodies, but their ability to work in exchange for a wage high enough to reproduce.

As I argued in the previous chapter, class position is altered and shifted by historical phases in which production processes change (Barker 2008: 1). As colonialism emerged, European feudal structures changed, giving way to the emergence of wage labour in the European core and a complementary, commodified form of slavery in the colonies. Moreover, as the chapter on the history of ports and airports has indirectly pointed out, individuals can change their class position. When Portuguese workers left Europe to settle in Brazil, some may have changed their class position by becoming overseers on sugar plantations (Brandon et al. 2019: 13). They may have found gold in the mines of Minas Gerais or Bahia, or made a fortune supporting the slave trade between the West African coast and Brazil. Individual enslaved blacks became "free workers" as sailors, barbers, or ship pilots, who were central to the smooth running of the trade (including with enslaved people). However, the overall structures of exploitation remain intact due to the historically grown lines of division along with gender, race, origin, etc. Class formations need to be understood as powerful and in part determining processes, rather than as clear-cut categories imprinted on all bodies regardless of space and time. For example, considering the free labour of seafarers, historically and currently, seafarers could enter into a legal labour contract as free workers. However, the history of maritime transport has normalised the practice of keeping seafarers on board for much longer than they have signed up for. This leads to massive unpaid overtime on a ship from which they cannot escape, turning their employment relationship into unfree labour.

Classes are not simply structures that define the positions of individuals, but in the dialectical understanding of structure/agency the agents of each class

push the boundaries of their structures through class struggle, from above and below, challenging time limits, break times, etc. from both sides (Bieler 2014: 115). When we look at logistics, the body, and the state, past struggles have been crystallised in infrastructures, laws, and the training, norming, and feeding of the labouring body.

5.2.2 Exploitation

A crucial aspect of the existence of classes is the degree to which surplus labour is extracted from human beings. Humans have a specific capacity to produce more products, services, and care than is needed for their survival and that of their relatives. This aspect is biographically fluid. With babies, children, disabled, pregnant or old people, this unique capacity is limited and even reversed: these people need more care and cannot give extra time for extra work to the community. Breaking kinship and family ties through violence makes it possible to exploit this capacity and create specific modes of production. This feature of channelling extra labour time from the community to the employer, landlord, etc. is one of the features of class societies. However, there is always a struggle and conflict over the extent to which the ruling class or capitalists can consume labour power. In the eighth chapter of Volume I of Capital, Marx equates the labouring body with labour power when considering the "premature exhaustion and exhaustion of labour power" following a lack of reproductive time and sleep (Marx [1867] 1957: 276-277). At the same time, however, he uses the "werewolf's craving" and the "vampyr's thirst" for "labour's blood" (ibid. 252; 266) as metaphors to express that labour power is something extracted from workers' bodies. I will use the latter interpretation when discussing the relationship between labour power and the labouring body. The body itself does not appear as an organism in Marx's work on a working day, although, as I will show below, he implicitly points to a metabolic rupture in the social reproduction of the worker's body, the receptacle of variable capital. The interesting aspect of Marx's chapter on the working day as a marker of the development of different degrees of exploitation is, on the one hand, the role of the state in eventually imposing certain limits on the physical and mental exploitation of the worker.

On the other hand, Marx also reveals the grave situation in which workers find themselves when capitalists and capitalism are not constantly challenged by organised labour. For example, Marx quotes from a labour report by a government commissioner in a London match factory in 1863. The report points to the high number of child workers, night shifts, 15-hour working days, and irregular meals in the workplaces themselves, which are "contaminated with phosphorus" (Marx [1867] 1957: 255-256) and poison the workers in the long

run. He notes: "Dante would find his most cruel fantasies of hell surpassed in this factory". (ibid.; own translation [AE]).

These huge health and safety violations express the inhuman dynamics of capital accumulation, which are essential to the reproductive position of capital accumulation. Similar to what I discussed in section 3.6 on the spatial tension between storage and commodity circulation, there is a temporal tension between the necessary times for the refreshment of labour power and its constant presence in the sphere of production. From the point of view of capital, the working day is 24 hours, seven days a week. However, as Marx pointed out, the urge to extract labour power from the labouring body has physical and mental limits (Marx [1867] 1957: 266).

It is not only nature that defines these limits, but also the way in which capitalism incorporates older forms of oppression such as white supremacy and patriarchy. Although women workers are never absent from the production sphere, they have to secure the next generation of workers and their labour power, either the next day or the next year. At the same time, a deeper form of exploitation is found among racialised and often displaced workers, who have less organised resources to defend themselves. I discuss below how exploitation is structured and organised differently in different workplaces, sectors, spaces and times.

5.2.3 Temporality

Workers have to reproduce their labour power within a certain period, which at the same time defines the degree to which workers are exploited. Exploitation is therefore characterised by two temporalities: historical and biographical. In terms of historical temporality, Silvia Federici (2014: 145) points out that the rise of capitalism in central Europe ushered in a new philosophical and political debate around the body. The new "ideal", supported by theorists such as Thomas Hobbes and René Descartes, conceived of the body, dead and alive, as a machine (ibid.). "Rational" action becomes the model for social behaviour. Metaphors emerge that equate the organs of the body with machine parts, such as the heart as a pump, the eyes as a lens, etc. (ibid.). Alienated wage labour means an artificial separation between wage labourers and their reproductive spheres, developed through a violent historical process. The human body is degraded into a machine in the labour process. At the same time, reproductive work is devalued and outsourced mainly to the female body, which performs this work unpaid and invisibly. Reproductive labour is a fundamental, if invisible, component of wage labour. I aim to make visible the connection between the sphere of production and the sphere of reproduction of capital accumulation through the human body, and to develop a comprehensive Marxist-Feminist theory of the labouring body. As Marielle Franco (2018:

136) points out, there is a history of labouring bodies in struggle, challenging and dismantling capitalist, patriarchal, and colonial (infra)structures, laws, norms, and violence. They are therefore not just objects or crystallising points of intersecting oppressions, but resisting agents in these histories of power relations (Ferguson 2016: 44).

Second, on the biographical line, the very life and ageing of bodies change the dependencies, possibilities, mobility, and conditions of and for working bodies (Amrith 2021: 252). Through the lens of disability studies (Watson/Vehmas 2019), non-impairment is only a temporary condition, especially for workers. Reasons for impairment include changes in the body due to pregnancy, breastfeeding, menstruation, menopause, ageing, and fragility of bones, muscles, and tissues. There are other reasons for impairment, such as illness and disease. Particularly in logistics, aviation and ports, workers are exposed to rapidly changing goods and people, including viruses and bacteria. Historically, ports such as Santos have been called the "graveyard of the world" because yellow fever, cholera, and the Black Death spread and became endemic in port cities (Read 2012: 4). More recently, airports have become "global superspreaders" of disease as the speed of air travel has compressed the space for capital and disease. Data from Covid-19 is still being collected and analysed. However, it is safe to say that most of the people who contracted the virus, died, or suffered from the so-called "long covid" are precarious and racialised workers.[53]

However, thanks to improved medical knowledge and therapy, bodies can survive severe physical and mental changes (Rembis 2019: 379). Throughout the history of labour and capitalism, workers became impaired when they could not integrate themselves into the increasingly mechanised and standardised processes of wage labour outside of communities and households. (Temporary) fatigue and the loss of concentration, strength, limbs, organs, and senses due to manual labour, child-rearing, war and illness manifest the obstacle to entering the labour market in terms of the body itself, rather than in terms of how the labour market and the whole system of production and reproduction is organised. Dis/ability is therefore individualised rather than presented as a feature of an inhumane, defective, and non-integrative society.

In addition, workers are excluded from the productive sphere when they are severely or gradually impaired at work (Rembis 2019: 380). Similarly, impaired workers also take up other jobs in order to survive, which drives the reform and resetting of the division of labour. The need for variable capital is so central to capital accumulation that it defines the body's ability to supply the commodity of variable capital as "insiders", while those unable to supply

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53   See also Albert Henry, Tanya (2020): Data from 10 cities show Covid-19 impact based on poverty, race. AMA; https://www.ama-assn.org/delivering-care/health-equity/data-10-cities -show-covid-19-impact-based-poverty-race [Access: 25.06.2021].

labour power are "outsiders with ramifications for society as a whole". (Harvey 1998: 408)

5.2.4 Spatiality

The labouring body is shaped and made by its class position and its relationship to the means of production. Alongside the historical/biographical, there is a spatial/geographical dimension to the re/making of the labouring body. The predominantly Anglo-American scholars of radical geography around Neil Smith, David Harvey, Doreen Massey, and Neil Brenner emphasised the spatiality of capitalism and the role of capital accumulation in creating uneven developments between different places (Wissen/Naumann 2008: 379). Empirically, their work emphasises the rise and fall of urban monopolies such as Detroit and Silicon Valley, the spatial division of labour and reproduction, and the global neoliberal equalisation of urban centres. Their approach builds on the work of Luxemburg and Lenin alongside Marx, and aims to make explicit their implicit spatial analysis of the extended reproduction of capital and its monopolisation (McDowell/Massey 1984; Allen et al. 1998; Brenner 1999; 2008; Smith 2008; Harvey 2016). The overall epistemological approach of radical geography allows us to see how the abstract processes of capital accumulation and circulation pulsate through cities, villages, workplaces, forests, states, continents, and relationships. This process is defined here as pulsating because this movement is summarised in three steps: spatial concentration, dispersal, and return.

The reasons for spatial concentration were already briefly described in Chapter 3: The characteristics of commodities, defined by the temporal limits of their use value, require a short or quick transport time to reach the market places. A short spatial distance to the market also allows for lower transport costs. Moreover, the shorter the distance, the faster the commodity, including the commodity of labour power, reaches the market. Workers and capitalists can even leapfrog competitors whose production sites are further from the market.[54] Moreover, the shorter the distance and the faster the transport time, the lower the risk for the capitalist that the commodity or raw material will be lost, and the lower the need to stockpile commodities or take out loans as indirect transport insurance. A spatial concentration of capital in one city reduces the

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54   In the 1930s, pilots, tugboat workers and stevedores literally joined forces in rowing teams at Dublin Harbour. The team whose boat reached the arriving ship first was awarded the contract and the concession to steer the ship into port and, eventually, to load and unload it. It was out of this competition to get their commodity (labour) to market first that Dublin's traditional rowing clubs came into being. See Ocean Focus (2007). Hobbling has turned to skiff racing in Dublin Bay. Ocean Focus, https://oceanfocus.ie/hobbling-has-turned -to-skiff-racing-in-dublin-bay/ [Access: 29.06.2021].

turnover time of capital and allows for a faster and thus higher accumulation of fluid capital (Das 2017: 512).

However, the concentration of capital has an antagonistic twin: the spatial dispersion of capital. The constant (re)development of transport infrastructures shapes space. In this process, those places dominate where surplus value can be realised (Rolf 2015: 125; Das 2017: 513). Many aspects, such as competition, lack of space for new factories, runways, and terminals, growing social demands and conflicts by workers and the dispossessed, and other structural and political aspects, force capitalists outwards and away from concentrated spaces. This process has been outlined in Section 3.7 on the "relocation" of ports and airports. Capitalists explore new markets, cheaper places of production, and transport networks. Thus, the centralisation of capital goes hand in hand with its decentralisation and dispersal. The consequence of spatial dispersion is contradictory. As discussed above, longer distances also require more storage and thus a further level of spatial concentration of commodities in warehouses as insurance against disruptions in circulation. This specific spatial concentration of goods in warehouses and dry docks is one of the predominant characteristics of globalised and decentralised market and production sites and the enormous increase in distances between them. In addition, the journey to global cities is relatively shorter because the connection is faster and more stable than the journey to a city or a place where fewer logistical networks and capital are concentrated. Small cities become more distant; it takes longer to reach them (Marx [1850-1859] 1967: 423).

Thirdly, however, competition also forces capitalists to look inwards, seeking new markets, non-commodified relations, and areas within already built and de-industrialised areas. This pulsating process of capital accumulation creates contradictions, as discussed in the chapter on logistics, when, for example, the fixed capital accumulated by settler colonialism is revalued centuries later by industrialised global capital through the port. Capital relies on socio-economic spatially fixed relations, while neglecting and creatively destroying those in search of new spatially, socially, and historically embedded markets and cheaper labour (Brenner 2008: 68). Harvey (2015: 99-100) points to the physical realities that create tensions between the inertia and movement of capital circulation. Since capital can only circulate through a logistical network and infrastructures with a fixed place in space, its circulation is spatially limited to these infrastructures, which cannot be moved and arbitrarily reconstructed. Such processes have created bottlenecks as described in section 3.7.

However, as Orzeck (2007: 501) argues:

What is frequently left out of this narrative is that the continual differentiation of spaces from one another uneven development is always also the differentiation of bodies from one another. The division of space is incomprehensible without the division of labour.

The degree to which the body is racialised, gendered, and dis/abled is largely dependent on the spaces, lives, and ages of the body itself. However, these

processes are spatially embedded in the pulsating movement of capital and the dynamics of capital accumulation between concentration, dispersal, and return. With the expansion and improvement of technologies for rearranging the circulation and accumulation of capital, the social aspects of labour are once again rummaged through. Masses of capital and labour are thrown from one sector of production to another (Marx [1867] 1957: 512-513; Luxemburg 2004: 415). This tension between, on the one hand, the need to increase the speed of turnover time and the technical progress in order to promote commodification and accumulation, and, on the other hand, the impact on work and the organisation of working people, contrasts with a stable, calm and secure working life and also leads to an immense waste of labour power. It seems that capital accumulation and technical progress drive political and social processes and not the choices of the workers, who instead become the appendix of these developments (Marx [1867] 1957: 512-513).

This pulsating dynamic also feeds into a constant revolution of the commodities themselves, as the labouring body is affected by the changing sector of production and requires a change in the reproductive regime of labour power. New ways of organising family, food, education, health and much more need to be implemented. Workers need new use-values, e.g., commodities (more protein-based diets, cheaper fast food, caffeine) that respond to changes in the reproductive sector and provide specific types of labour power. Related to this corporeal spatial reorganisation that enables labour to create surplus value are

… [T]he production of artefacts ranging from material goods to symbolic forms. It is the very elasticity of, and the creative capacities embedded in, our universal human corporeal organisation that can turn bodily limits into cultural opportunities and that create the variety of human worlds (Fracchia 2005: 52).

The mass production of goods through the meat industry, fast food chains, and delivery chains is linked to the constant demand for a particular type of labour. It is linked to changes in the division of labour. What is new today is how communication technologies have made it possible to implement this culturally and socially specific micro-logistics system in the global cities of the North and South. Food delivery services and domestic work services such as "Helpling" or accommodation services such as "Airbnb" are online platforms where workers order a job with a simple "click". The platform worker herself becomes a hinge between the restaurant/taxi company/household industry and the customer, that is: between production and reproduction (Scholz 2017). The development of technology, the increasing casualisation of labour, and the growth of the service sector allow for the implementation of a micro transport system in the infrastructure of global cities. It integrates even restaurants, which usually create foot traffic to serve directly at the place of production, into a wider circulation network mediated by the logistics network and labour.

These processes are internally linked to the porous and processing capitalist totality. Scholars of human and economic geography demonstrate the impact of racialised, dis/abled, and gendered spatial divisions, the global North and South, and how they shape working conditions and access to the labour market based on workers' bodily inscribed, categorised, and marked characteristics. These vary greatly from region to region and sector to sector (Flather 2013: 344).[55]

To quote Ferguson (2016: 53):

Depending upon which spaces different bodies occupy within this hierarchical world-system, they have greater or lesser access or entitlement to quality education, health care and neighbourhoods, to safe workplaces and commutes to and from work, to basic rights and freedoms. As a result, people's labour and lives are differently valued within capitalism from the beginning – and capitalist relations draw on, and help to reproduce and reshape, those differences largely through political, economic and social means of racialisation and racism.

Spatial living and reproductive conditions also predict which workers will have to travel long distances, or even migrate for longer periods of time, to get a job, and work in low-paid and more likely unsafe sectors (Ferguson 2008: 52). As such, infrastructures and spaces of reproduction mark and very often racialise their inhabitants and users.[56]

Working bodies are intertwined with class positions, exploitation, and historical and spatial processes because workers' struggles have always shaped history and the geographies of labour and capital concentration (Herod 2001: 3-5). In order to deepen the dangers of unlimited and therefore precarious exploitation, I would like to introduce the notion of Social Reproduction Metabolism and the metabolic rift in relation to occupational health and safety and the physical and mental limits of the extraction of labour power from the labouring body.

5.3 Social Reproduction Metabolism

Embedding the body in the spatio-historical and spatio-corporeal processes of capitalism and struggle, theorists of Social Reproduction Theory take work and labour as their vantage point to access the agency and entanglement of

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55   Moreover, reproduction is not spatially reduced to the household, but is accessed via all sorts of relationships and infrastructures which renews variable capital and its receptacles (Schild 2019: 27).

56   Not all spaces are prone to becoming "hotspots" for disease, but spaces such as densely populated working-class neighbourhoods, refugee shelters, or cities in the Global South with low and disruptive reproductive infrastructures and a lack of energy, clean water and sanitation systems have greater potential than clean and well-maintained residential areas (Graham 2010: 9-13).

embodied labour. They argue that there is no work outside of gender, race, ability, and vice versa (Ferguson 2016: 55). Work is defined as a broader, internally related process between nature and social relations, combining the knowledge and practical activities of human beings in order to live and survive. It thus encompasses all kinds of work, such as art, reproduction, learning, craft, and more (Ferguson 2008: 50). In contrast, labour power is understood more narrowly, as contained and appropriated by the logic of capitalism (Bates 2015: 128) in the sphere of production and reproduction (Ferguson 2008: 50). Capitalism needs labour to reproduce itself because it cannot produce labour power. It capitalises from the sphere of reproduction and primarily unpaid or low-paid labour in the supply of receptacles for labour that are cleaned, educated, fed, healed and dressed to go to work in exchange for wages.

The internal relationship between production and reproduction cannot be separated. Both are part of a socially and naturally constructed metabolism that creates and sustains the labouring body within the capitalist system (Ferguson 2016: 49-50). In some sectors, the latent or apparent threat of a rift in this social reproductive metabolism poses serious, potentially fatal dangers. The question of human reproduction in capitalism is as crucial as the question of wages or working hours. It is indirectly raised in every strike, from which possible trade union strategies can be derived. Every form of work affects the body differently and inscribes itself in the bearer of variable capital (Poulantzas 2014: 29). Despite actual attempts within fascist, authoritarian, and other forms of capitalist states to completely control the site of reproduction of the labouring body, the sphere of reproduction remains characterised by a certain spatial and temporal autonomy that is constantly contested (Lorde 2017: 17; Franco 2018: 137).

In the current capitalist conjuncture, production, and social reproduction remain relatively separate as antagonistic, internally related parts connected through the labouring body. Nevertheless, the reproductive side is largely influenced and shaped by the capitalist mode of production, distribution and consumption. Marx used the term "metabolism" to reflect "the complex interdependence between human beings and nature" (Foster 1999: 381). The word expresses the idea of a circular process in which natural resources for living and survival are constantly reproduced (ibid.). While nature produces use-value, it can only be transformed into exchange-value by human labour harvesting and transporting these products. However, as has been discussed in relation to logistics, use values determine how products are transported, preserved, harvested, and stored; e.g., (natural) use value largely determines the labour and division of labour required to extract it. At the same time, the receptacle for labour power itself comes from nature, and therefore nature does indeed provide the basis for exchange, also because it literally provides the physical and material basis for industry and infrastructure (ibid. 387). As discussed above, the accumulation of capital requires a constant inflow of labour

power, since fixed capital, machinery, factories and raw materials are useless without living labour power and surplus labour (Marx [1867] 1957: 266).

In contrast to the circular process of metabolism, the metabolic rift is a term that describes a break in the cycle or, more profoundly, a linear extractive process. Instead of a reflux or a form of reproduction, the metabolic rift is characterised by constant exploitation through "deforestation, loss of soil nutrients, poor air quality, water pollution and erosion, toxic waste, depleted marine resources" (Salleh 2010: 206). The metabolic rift in capitalism "destroys the metabolism of humanity and nature in the endless pursuit of profit" (ibid.). The concept refers to the possible or already realised differentiation of a material, product or living space. Marx's conceptualisation of the metabolic split was linked to his implicit spatial analysis of capitalism and the pulsating movement between concentration, dispersion and return illustrated above. This process shapes and transforms the production of labouring bodies. It influences the spatially unequal access to the racialised and gendered global labour markets and the unequal impact of labour on their bodies, especially in the transport sector.

Marx begins by tracing the circulation of fertiliser and the agrarian crisis in central Europe, which he sees as a consequence of the concentration of labour and capital in the cities. As industrial centres, cities depend on the production of wheat, soya, and meat, among other essential foodstuffs, while developing their own metabolism between the labour market and the retail trade. Workers are excluded from the livelihoods of the countryside from which they migrated. While the city and countryside are tightly intertwined in a tense internal relationship, both sides are affected by the need to grow, expand, extract, and exploit without returning the necessary ecological resources to maintain the metabolism between man and nature. A capitalist-nature metabolism is by definition impossible. The concentration of capital ultimately forces its dispersal. The spaces of different global areas of capital and large-scale primary commodity production, with their centres of production, have remained connected through capitalist markets and their transport systems (Foster 1999: 379-380). In this globally expanding structure of capital accumulation, Marx analysed that the metabolic rift appears through an obstruction of the internal relationship between land and city due to large scales and distances. Both, industry and land, appear as autonomous sites. However, production sites, failed harvests, and disruptions in transport systems vividly reveal spatial interconnections. Bailey and Wellesley's (2017) study of global food supply chains, and the risks of coastal and maritime chokepoints disrupting these chains and causing famine, is an excellent example of these dependencies.

In addition to spatial distances and metabolic dis/connections, Marxist ecologists argue that capitalism ultimately undermines its basis for capital accumulation through multiple metabolic rifts in nature, especially in the "thermodynamic reciprocity of humans and habitat" (Salleh 2010: 206). We have

seen new inventions and investments to sustain the process of capital accumulation, the destruction of nature, and a habitable climate in all parts of the world. This observation includes the over-exploitation of the labouring bodies of workers.

While the term metabolism has been used mainly in Marxist-ecological debates and to some extent in feminist discussions (Paterson 2014: 326-327), I propose its implementation in industrial relations and the critical political economy of labour relations by focusing on metabolism in the reproduction of the labouring body. In the work of Foster, Ferguson, Moore, and others, the labouring body is analysed as the result of various processes such as capital accumulation and social reproduction. The chapter argues that the labouring body needs to be recast in social reproduction theory, using the metabolic rupture as a concept that addresses the consequences of over-exploitation.

Over-exploitation has individual characteristics embedded in gendered, racialised, or precarious exploitation patterns, as will be discussed in the following chapters. The capitalists' ownership of commodities characterises the alienation of workers from their labour. They control the forms and infrastructures and reproduce the distance between capital and nature on a smaller socioeconomic scale. As Harvey (1998: 408) points out,

The gap between what the laborer as person might desire and what is demanded of the commodity labor power extracted from his or her body is the nexus of alienation.

This tension reappears when, despite what is ultimately "free time" after work, the mode of reproduction has to match the mode of labour that the specific workplace regularly extracts from the body in exchange for a wage. Workers are thus alienated from work and, to some extent, from their reproductive labour. As noted above, Marx implicitly addresses this metabolic rift in the first volume of Capital when he asks:

What is a working day? How long is the time during which capital is allowed to consume the labour-power whose daily value it pays for? How far can the working day be extended beyond the labour-time necessary for the reproduction of labour-power itself? To these questions, as we have seen, capital answers: the working day counts a full 24 hours daily, after deduction of the few hours of rest, without which labour-power absolutely fails its renewed service. It is self-evident that the worker spends his whole day with nothing but labour-power, that therefore all his disposable time is labour-time by nature and by right, and thus belongs to the self-valorisation of capital. Time for human education, for spiritual development, for the fulfilment of social functions, for social intercourse, for the free play of the physical and spiritual life forces, even the celebration of Sunday – even if it were in the land of the Sabbath saints – pure frippery! But in its immoderately blind impulse, its werewolf's ravenous hunger for more work, capital overruns not only the moral but also the purely physical maximum limits of the working day. It is robbing the time for growth, development and healthy maintenance of the body. It robs the time required for the consumption of free air and sunlight. It detracts from the meal and possibly incorporates it into the production process itself so that food is added to the worker as a mere tool of production, like coal to the boiler and tallow or oil to the machinery. The healthy sleep for

the collection, renewal and refreshment of the vital force is reduced to as many hours of torpor as the revival of an absolutely exhausted organism makes indispensable. Instead of the normal preservation of labour-power here determining the limit of the working day, conversely, the greatest daily possible expenditure of labour-power, however morbidly violent and embarrassing, determines the limit of the worker's resting time. Capital does not ask about the life span of labour-power. What interests it is solely the maximum of labour-power that can be made liquid in a working day. It achieves this goal by shortening the duration of labour-power, just as a greedy farmer achieves increased soil yield by robbing the soil of its fertility. (Marx [1867] 1957: 275–276; own translation [AE])

All time in which no surplus value is produced, whether by refreshing the soil or by the sleep, leisure, or recreation of workers, is lost time for capital. In the process, the metabolic rift also creates premature death or dead labour, which is not only the crystallised labour power in every commodity, machine, infrastructure, and service, but also the inevitable exhaustion of bodies and the end of life (Marx [1867] 1957: 276-277). The final remark about the greedy farmer who robs "the soil of its fertility" is not just a metaphor; it is precisely the same metabolic rift within the nature-capital relation: What capital cannot produce itself but is ultimately produced by nature, the fertility of the soil or human labour, is destroyed by the "werewolf hunger" and the destruction of the capitalist mode of production.

Capitalism is based on labouring bodies, as the "materiality of the body makes production a necessity, and in the process forms the basis of how human life is sustained" (Bruff 2013: 67-68). Capitalism "was founded on the backs of bodies, and … it is reproduced through them" (ibid.). In this way, the metabolic rift is not only a human-nature but also a human-human process and danger, as nature defines the materiality and limits of the labouring body. Reframing the lack of health and safety and social reproduction as a risk of metabolic rift helps to emphasise the urgency of the problem for embodied labour at the chokepoint. There are many struggles in the logistics sector that address the threat of a metabolic rift in social reproduction.

5.4 Exploitation patterns

I use the term "exploitation patterns" to bring together class position, exploitation, historical/biographical, and spatial/geographical dimensions. It explores how gendered and racialised physical characteristics and behaviours of transport workers are naturalised. I operationalise the making of the labouring body by looking at the dynamics of segregation and casualisation. Labouring bodies are made and remade through spatial, historical and biographical processes, so that exploitation patterns are not eternal and inscribed throughout their lives, but fluid and porous. However, they are embodied and their effects

are experienced bodily and are dominant in the workplace. It shapes and dedicates the behaviour, the external view, and the degree of physical (self) exploitation. Exploitation patterns are prevalent in all workplaces, but have different characteristics and effects on how spatially accumulated capital processes organise and exploit workers' labouring bodies. I categorise the specific patterns I found in the researched chokepoints as masculinist, feminist, racialised, and precarious exploitation patterns. All of these play a role in dividing and exploiting the workforce, and sometimes in creating a survival strategy in a hazardous workplace. I propose these patterns to operationalise the theories of the labouring body and the metabolic divide discussed above. They help zoom from the broader histories of colonialism and transformations of ports and infrastructure to my findings at the chokepoints. They are a lower level of abstraction than the historical analysis I will provide in the following two empirical chapters. To me, those categories are helpful for my relational and embedded comparison, but could or should be modified for other workplaces and sectors.

5.4.1 Masculinist Exploitation Patterns

In order to capture this form of exploitation, which is predominantly observed in ports, I first turned to critical masculinity studies and the concept of hegemonic masculinity. I will briefly explain this concept and why I have replaced it with the term "masculinist exploitation patterns". Hegemonic masculinity was developed in the 1980s and promoted by Raewyn W. Connell and James W. Messerschmidt (2005). The authors use Antonio Gramsci's concept of hegemony to analyse shifts between cohesion and consent and the dynamics between antagonistic classes. Connell and Messerschmidt apply it to gender relations (ibid. 831). Hegemonic masculinity is a non-essentialist and non-transhistorical, relational concept in which they understand different forms of masculinity as a pattern of practice. It refers to a constantly changing and reshaping hegemonic masculinist structure. Subordinate or complicit masculinities either aspire to or resist receiving more or less patriarchal power benefits (Connell/Messerschmidt 2005: 832). The approach sought to unpack patriarchal practices. Hegemonic masculinity replaces the one-dimensional and essentialist theory of gender roles with a relational and flexible concept of masculine cohesion (ibid. 834-842). The hegemonic masculinity approach has been used in military studies, criminology, health and safety research, and labour studies to analyse specific male behaviours (Duncanson 2015: 232; McKay 2021: 5).

In later studies, the authors developed four non-hegemonic types of masculinity (Messerschmidt 2019: 86-87). These are complicit, subordinate, marginalised, and protest masculinities, all of which (while not embodying hege-

monic masculinity) benefit from unequal gender relations by perpetuating patriarchal norms and behaviours, and suffer from patriarchy and racialisation to varying degrees. I would like to highlight the last category, in particular, that of protest masculinity. It is defined as "compensatory hypermasculinities that emerge in response to social positions that lack economic and political power" (ibid.). This type fits the port workers and seems to capture my observations and thoughts very well.

However, when I tried to use the concept, I found it stuck in patriarchal power relations, largely neglecting or obstructing capitalist and racist dynamics as intertwined mutual processes. While workers' masculinist practices and behaviours are analysed, they are not set in relation to the capitalist social whole. Patriarchy and hegemonic masculinity somehow exist like roads built directly in the air, without any connection to the capitalist spatio-historical totality in which they emerge. This is problematic because the authors refer directly to Gramsci, who, in contrast to their approach, developed his concept of class cohesion, de/mobilisation, and historical change by linking it to the overall economic and political capitalist social whole, not by separating it from it (Scherrer 2009: 343). Although the authors attempt to move beyond this one-dimensional perspective on masculinity (Connell/Messerschmidt 2005: 831), they remain largely within a reductionist "model of cultural control" (ibid.). Nevertheless, there is a danger that the authors conflate workers' bodies with masculinities. However, I argue that masculinities, like racialisation, only function within a particular space and time. As such, they appear fragile rather than an inbuilt, solid characteristic, even if the effect of the pattern in the workplaces is inscribed on the body.

In short, I welcome the exploratory focus on masculinities, but lack an answer to why and how masculinities and patriarchal power relations are deployed and transformed within capitalism. In the port sector in particular, I observed a robust but porous pattern of "protest masculinity". The media used masculinist practices such as drinking, tattoos, and half-naked muscular bodies to distance the wider population from their strikes or labour disputes (Engelhardt 2020b). While the term "masculinity" still somehow functions as an umbrella term for the set of practices observed, I found it much more directed against the dockers themselves than against subordinate masculinities, even if they are features of it. However, the masculinist patterns primarily support the exploitation of men's bodies while at the same time allowing them to survive in their work.

Therefore, I will use the term masculinist exploitation patterns to better capture the actual dynamics and set of practices found at the coastal chokepoints and their workforce that are targeted at and practiced by male workers. The masculinist exploitation patterns are understood, following Wolfgang Hien (2009: 136-137), as a socio-culturally and historically produced pattern and not as a biological or "natural" category associated with the male gender.

It fills a vacuum where inclusive class solidarity has been wholly or partially dismantled. This process may have occurred, for example, through lost struggles in the past for the inclusion of women workers, or through a gendered struggle for health and safety protection that has left male workers exposed to a greater physical and dangerous workload. More generally, increasing precariousness and de-organisation of the workforce could be a factor in creating this pattern, among other possible reasons. I argue that masculinist exploitation patterns develop in tandem with gendered and exclusive struggles for certain rights, laws, social changes, and everyday experiences in the workplace. They are individualist, neoliberal (non-static) ideas, norms, and practices about male workers and their labouring bodies in particular sectors that reproduce a specific behaviour that on the surface appears to privilege cis men, but in reality, feeds into an increased over-exploitation of male rendered workers.

5.4.2 Feminine Exploitation Patterns

When discussing hegemonic femininity and female exploitation patterns, it is important to first remember that masculinity and femininity are not just two opposing gendered cultural behaviours. Nevertheless, both have developed through capitalist and patriarchal norms (Paechter 2018: 121). Mimi Schippers (2007) and Carrie Paechter (2018) recover hegemonic femininity from an overarching scholarly focus on hegemonic masculinity, in which there is no space for femininity except as complicit in the masculinist set of dominant practices (Schippers 2007: 87). Unfortunately, they remain an essentialist understanding of the feminine and masculinist sets of norms and behaviours. They do not link them to the capitalist whole, which is entrenched and permeated by patriarchal and white supremacist power relations. These, however, are spatially embedded and cannot be considered a priori or detached from a direct spatio-historical analysis. Capitalism structures the division of labour along historically and spatially constructed pathways. While I agree with both authors that hegemonic femininity cannot be reduced to another type subordinated to hegemonic masculinity and has its own characteristics, forms of oppression, and is racially entrenched (Schippers 2007: 87; Paechter 2018: 122-123), I understand it as another form of exploitation of female rendered working bodies under a patriarchal capitalist mode of production in a specific workplace.

Like the masculinist exploitation patterns, the feminine exploitation patterns have a biased character. Just as the naturalisation of masculinity creates exclusivity on the one hand and a specific form of over-exploitation on the other, so does the feminine exploitation pattern. In the aviation sector, for example, the feminine exploitation patterns did not lead to the exclusion of male workers from the side of female rendered labourers, but through the company and the interests of capital, which benefited from the patriarchal male gaze and

the exploitation of female embodied labour (Tiemeyer 2004). With homosexuality still illegal or treated as a mental illness, male stewards' access to the airline industry was restricted. While the hyper-sexualisation of the young, slim, attractive, and intelligent female cabin crew increased sexual harassment and violence, male workers were rendered weak and "unmanly" upon entering the profession. This example shows that the female exploitation patterns exclude male workers. However, unlike the masculinist exploitation patterns in the port, in the aviation sector, this is based on hyper-sexualisation linked to a patriarchal heteronormative concept of sexuality in which male workers were not welcome.

The aviation industry strictly regulated women's bodies and their reproductive sphere. In many countries, such as the United States or West Germany, female cabin crew were forbidden to become pregnant or to marry (Koch-Baumgarten 1998: 288). In either case, they would be excluded from the labour market in aviation. The same applies to reaching a certain age. The career of a female cabin attendant initially lasted no longer than a few years until she reached the age of 32-35 (Barry 2007: 97). This exclusion again underlines that the working body is dependent on a biographical/temporal rhythm. The ageing of the female body and the airlines' marketing strategies are mutually exclusive. While the feminine exploitation patterns flatter cis-female rendered workers who temporarily fit the regulations, it would aggressively exclude workers with bodies that do not conform to the required standards (anymore) (Tiemeyer 2019: 74).

5.4.3 Racialised Exploitation Patterns

According to Edna Bonacich and Jake Wilson (2008: 343), the racialisation of labour is defined as "a historically specific process" in which a group of workers is discriminated against on the basis of physical or other characteristics. These are naturalised as "special", such as religion, language, dialect, nationality, or origin (Bonacich et al. 2008: 343; McKay 2021: 4). Thus, racialised exploitation patterns are premised on the body and an extra-bodily constellation of characteristics. Certain behaviours and views are essentialised from such constellations and then uniformly projected onto the group, such as "laziness", "stupidity", "arrogance", and more (McKay 2021: 15). Racialisation and gendering do not define the group that discriminates, but the group that is discriminated against. Therefore, as Simone Claar (2018: 20) points out, "the matter of race is not only an economic but also a political and ideological factor." However, the racialisation of workers in particular spaces and relationships has social and economic consequences.

Historical studies of colonial and postcolonial port cities show that racialisation has occurred at different times, in different forms, and to different de-

grees (Brandon et al. 2019: 15). Thus, racialisation is spatially and historically sedimented. Some spaces are transformed into exclusive "white" areas that subordinate or obstruct certain predominantly non-European/migrant bodies, while others are not (McKay 2021: 6). At the beginning of capitalism, through global maritime transport systems and colonial exploitation, European capitalists and feudalists used the "blackness" of bodies as a marker for low-paid and manual labour (Brandon et al. 2019: 15).[57] However, race has been expanded as a general "category of separation, always operated in combination with other markers of difference" (ibid.). Racialisation through essentialised physical characteristics, background, language, and more is used in the transport sector to divide labour into so-called "high" and "low" skilled occupations. This has historically grown and been challenged, but the spatial markers are still visible in the racialised labour segregation on ships, planes, and in different categories of jobs at chokepoints.

5.4.4 Precarious Exploitation Patterns

There have been several discourses on precarity over the last decade or two. They have approached precarity from very different angles in order to understand where it comes from and its socio-political implications. According to Judith Butler, from the point of view of the human body, precarity is a constant feature of life because bodies live with the risk of dying. In her text "Precarious Life", Butler states that

Precarity only makes sense if we are able to identify bodily dependency and need, hunger and the need for shelter, the vulnerability to injury and destruction, forms of social trust that let us live and thrive, and the passions linked to our very persistence as clearly political issues. (Butler 2012: 148)

This idea is essential when considering how violence, physical and mental oppression, and class power relations can be maintained, especially when ex-

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57 The equation of being "black" or "brown" with manual and precarious labour also recurred in working-class songs. The German folk song "Schwarzbraun ist die Hasselnuss, schwarzbraun bin ich" (black and brown is the hazelnut, black and brown am I) is about a worker who is proud of being black and brown, e.g., a hardworking labourer who is characterised by sunburned skin because he works all day in the field in the sun. He seeks a similarly coloured/hardworking woman as a mate (Boock 2001). Despite this tradition, and despite the fact that the song was part of the workers' movement, it was later used in a disturbing way by the fascist movement, and the colour was associated with brown uniforms, even though it came from the politically opposite direction. Another example is the Portuguese folk song "Grandôla Vila Morena" by José Afonso. It became the unofficial anthem of the Portuguese Revolution of 1974/75. The song describes a "brown village" in the south of Portugal, characterised during the dictatorship by agricultural day labourers with sunburned skin (brown), who were the first to be organised by the Communist Party against the Salazar regime. In both cases, the brown or black comes from the hard work in the fields under the sun, day in and day out, which leaves its mark on the bodies of the workers.

tracting surplus labour from the oppressed. Our physical and psychological integrity and the fear of metabolic disruption allow forces to control our inherently political bodies.

However, not all bodies and all workers are exposed to the metabolic divide in the same way. Gendered and racialised exploitation patterns have already been discussed above, segregating and exploiting workers in different ways, as will be shown later. Precarious work also significantly increases the risk of fatal accidents and poisoning, forcing workers to constantly reorganise their existence. Social Reproduction Theory highlights this point when looking at the metabolism between production and social reproduction and the different spatial and biographical access to leisure and survival.

As Harvey (1998: 409) points out, Marx also understood the fragility of labour reproduction and its unfixed conditions, which, as discussed above, depend on the spatio-corporeal positioning of the body within the uneven and combined economic spaces of capital accumulation across the planet. It also depends on the history of class struggle, which has or has not defended the conditions under which variable capital can be extracted from the labouring body. Achievements of the labour movement, such as the 8-hour day, maternity leave, or unemployment benefits, limit the processes of exploitation. However, these limits are constantly under attack by industry or the state. The metabolic rift translates concretely into fatal accidents, deaths at work, and deaths due to lack of access to hospitals, clean water, healthy food, or sufficient sleep. The risk of metabolic rupture is a process that can include temporary impairment, congestion, fatigue, depression, and substance abuse, which in the long run can lead to the end of life if not healed and systematically challenged. Superficially, fatalities are not always workplace related. Incidents such as plane crashes, suicides, explosions, and deaths from cancer or respiratory diseases are not related to overexploitation. The systematic neglect of occupational health and safety helps to individualise such "personal dramas". At the same time, they must be linked to a system that not only accepts the death of working bodies, but in some cases deliberately relies on it.

Although we all have bodies that will eventually die, working bodies are unevenly exposed to the risk of metabolic failure or premature death (Tyner 2019: 10-11). This precariousness and unevenness are what constitutes precarious exploitation patterns at chokepoints. Workers are exposed to unpredictable shift flexibility and an increase in accidents, while losing time and opportunities to organise.

5.5 Social Reproduction Metabolism as a Tug-Of-War

As discussed above, one of the essential preconditions for the functioning of capitalism is the exploitation of the human capacity to work more than is necessary to reproduce oneself and one's relatives. Capitalist society has many ways of constantly increasing the flow of extra time from the private and reproductive sphere of the worker to the realm of commodity and service production. The temporal and spatial conflicts around labour resemble a game of tug of war. While the workers' movement defends their reproductive time and space, capitalist society seeks to incorporate them entirely for the extraction and circulation of surplus. The capitalists' pushing of workers' physical boundaries leads to many violations of occupational health and safety restrictions.

There is a temporal tension between the times needed to refresh the labour force and its constant presence in the sphere of production. In general, the metabolism is characterised by a back-and-forth process in which the temporal and spatial limits of the reproduction of the labouring body are contested. Capitalists do not own workers and cannot arbitrarily endanger them. This is the crucial difference with a mode of production based primarily on slave labour, in which the entrepreneur owns the body. In a system based on wage labour, it is the extracted labour, i.e., variable capital and what it produces, that is owned by the capitalist. The extraction of labour is limited by the working day and breaks, although the form in which it is extracted (machinery, timing, work processes, materials, and so on) is again mainly determined by the owner of capital.

As Harvey (1998: 408) points out:

The commodity which the laborer (qua person) exchanges with the capitalist is labor power, the capacity to engage in concrete labor. The basic condition of the contract is supposedly that the capitalist has the right to whatever the laborer produces, has the right to direct the work, determine the labor process, and have free use of the capacity to labor during the hours and at the rate of remuneration stipulated in the contract. The rights of capital are frequently contested and it is interesting to see on what grounds.

These "grounds" can again be categorised as spatial and temporal conflicts. I will elaborate on these examples and their consequences below. To summarise the theoretical notion, the temporal and spatial conflicts on the boundary between production and reproduction appear to be the line of the rope in a game of tug-of-war that essentially threatens the metabolism of the labouring body. The tug of war exhausts the workers. Some are more affected than others when it comes to the consequences of discrimination. At the same time, as long as the rope cannot be cut, the pressure and tension of such a back-and-forth can also lead to strong resistance movements that challenge the limits, for example, of the means of production and reproduction.

5.5.1 Temporal Conflicts of SRM

A temporal factor to regulate the working body is the extension of the working day through longer and more shifts, as Marx discusses in detail in Chapter 8 of Volume 1 of Capital. Longer working days naturally reduce the reproductive time for sleep, food, and care. In Volume II of Capital, Marx ([1885] 1971: 125) also refers to the introduction of night shifts to synchronise production and working time. However, as discussed above, since reproductive work (such as cleaning, caring for babies and the elderly, and preparing meals) is mainly done at night, women have always been excluded from night shifts. Battles over (gendered) working hours are an important factor in the history of industrial and class struggles. As Harvey (1990: 420) puts it, "different class perspectives dictate different time horizons for social calculation". Time measurement has been contested since the end of the 13th century, for example, in relation to the installation of church bells in every village (Patel/Moore 2018: 97-99). However, the mechanical clock did not end struggles over the length of day and night shifts, but brought them to a new technological level for workers and capitalists (Negrey 2012: 16). Such struggles are still relevant, given that many ports and airports operate 24 hours a day.

Another temporal factor is the capitalist synchronisation of different "natural" time patterns, thus ignoring the different times needed for reproductive work such as giving birth, caring for children, caring for the sick and elderly, and other caring work, which leads in part to the exclusion of mainly female reproductive workers and their bodies from the world of work driven by the patriarchal and colonial domination of time (Harvey 1990: 420). The capitalist system needs workers, but because "time is money", the time required for labour that does not directly produce a surplus is wasted time on the side of the capital circulation. At the same time, it is also necessary to reproduce the receptacle for variable or living capital. Women and children are sometimes swallowed up by the "circulation of variable capital". Meanwhile, labour struggles, economic crises, labour shortages and the need for reproduction push them out of the direct cycle of capital accumulation (Harvey 1998: 407).

5.5.2 Spatial Conflicts of SRM

There is a spatial struggle over reproductive tasks and the spaces in which they are performed. For example, if uniforms and working clothes are maintained and cleaned in company-owned or subcontracted facilities, this is taken out of the reproductive spaces of the workers. However, if workers have to clean their uniforms, this falls within their private sphere of reproductive tasks and spaces (Boewe et al. 2021: 15). Spaces of reproduction can pose a risk to workers' social reproductive metabolism not only when they are occupied with

productive tasks. If production and reproduction spaces are located far away and require long commuting times during which neither production nor reproduction is possible, this can exhaust workers. On the other hand, when production and reproduction spaces cannot be clearly distinguished because work and reproduction are carried out in the same space, such as work on ships, in 24-hour day-care centres, or home office work, it becomes a challenge to separate productive and reproductive spaces and to maintain some autonomy in the reproductive sphere. But it also means looking at the workplace itself as an inscription of specific modes of production and reproduction. Workplaces and their machinery and infrastructure must allow workers to do their jobs in a healthy way that does not interfere with their reproductive time. In the event of work-related accidents, workers must have access to hospitals or be cared for by partners, family members, and extra care companies. They cannot return to work until they have recovered. For this purpose, the spatial conditions at the workplace itself must be secured.

Overall, precarious exploitation patterns force rapid turnover of workers and a loss of skills, experience, and knowledge about organising in the sector. In interviews and discussions with trade union officials, workers, their families and social movement network activists, it became clear that neither racialised nor gendered exploitation patterns affect port and airport workers in the way that precarious exploitation does. The impact is twofold: Workers either refrain from being active or participating in workers' meetings or strikes altogether because of the loss of wages or the fear of being dismissed or put on extra stressful shifts is exceptionally high. As Lynford and Runciman (2022: 23) point out in relation to the growing precariousness of South African construction companies: "It is not the lack of formal rights that distinguishes core and non-core workers but their ability to exercise these rights under conditions of precarity." But when workers decide to take part in meetings, activities, and strikes, it is a matter of life and death for them. They could lose their jobs, their homes, their families, and even their lives if they lose. If they win, even temporarily, the constant fear is lifted and they may become fierce trade union activists. With the metabolic rift constantly hanging over the heads of precarious workers, it is often a question of all or nothing, so organising in the sector must be precarity-sensitive. Precarious work is intertwined with racialised and gendered exploitation patterns that intensify the level of exploitation and the impact on the bodies of the disadvantaged.

5.6 Concluding Remarks on Embodied Labour and SRM

In order to approach the (labouring) body of workers, I argued that the labouring body must be materialised and (re)embedded in the social, political,

and economic theory of Marxist-Feminism. Its gendered, dis/abled, and racialised materiality must therefore be reconsidered as spatially and historically contingent. The materiality of the body is radically political, and the absence of materialist analysis obscures diverse histories, experiences of resistance, and struggle. In discussing hegemonic masculinity, hegemonic femininity, and racialisation, I embed these notions within my concept of exploitation patterns and within a concrete spatio-historical and spatio-corporeal dynamic of the social whole, the transport sector under capitalism.

I captured the labouring body firstly through its class position, secondly through exploitation, thirdly through a temporal dimension, and finally through a spatial dimension. In this way, I used the spatio-historical and spatio-corporeal parameters of Chapter 2 to explore how labouring bodies and the capitalist social whole interfere.

Later, the chapter returned to Social Reproduction Theory (SRT), combining it with an ecological Marxist lens through the concept of the metabolic rift between capitalist exploitation and nature. I used the texts of John Bellamy Foster and Jason Moore, combining their ideas with a Marxist-Feminist understanding of social reproduction as metabolism. Here, the labouring body is an agent and structure of the process. I outlined the risks of metabolic rupture for the labouring body and the structural acceptance and calculation of death and dead labour in capitalism. I added another dimension to the operationalisation of the metabolic rift: the precarious exploitation patterns. Precarious has a double meaning here. Precarity leads to the over-exploitation of labouring bodies and pushes them towards a metabolic rift. Precarity also describes the instability of the exploitation patterns. The pattern can be disrupted and changed if the precarious workers are organised. The chapter approached the double-edged sword of precariousness, entangled with health and safety risks, from the perspective of the labouring body.

I would add that in workplaces, exploitation patterns merge and create a complex matrix for everyday work. As mentioned above, predominantly female and racialised workers and their bodies operate in the realm of masculinist and precarious and racialised exploitation patterns in the same space. As noted above, none of these power relations are static. Yet workers also react, change their position, or even live "under the radar" of certain forms of discrimination and oppression. I use these patterns to represent specific trends and dynamics, while being aware of the everyday messiness of reality that challenges such categories in one way or another.

In the next chapter, I will move towards a more empirically and historically concrete visualisation through the example of port and maritime labour and aviation and their specific racialised and gendered exploitation patterns. In chapter seven, I will then apply the temporal and spatial conflicts of exploitation patterns around the production of labouring bodies to the specific chokepoints in Brazil and Portugal.

6. Embodied Segregation and Exploitation at Chokepoints

Labour in white skin cannot emancipate itself where it is branded in black skin. But from the death of slavery sprang at once a newly rejuvenated life. (Marx [1867] 1957: 315; own translation [AE])

In order to approach the specific spatial, bio(geo)graphic, and historical developments of the working class and its labouring bodies within the transport sector, in this chapter I will look at racialised and gendered forms of segregation in maritime transport and aviation. In tracing historical developments, I analyse empirical evidence from Portugal and Brazil and how specific forms of gendered or racialised segregation have survived within the labour force. I also explore the extent to which they continue to be a significant obstacle to trade union organising and the struggle against precarity in chokepoints. Gendered and racialised labour can be analysed in terms of vertical and horizontal segregation. Horizontal segregation describes the gendered and racialised division between different sectors, while vertical segregation is used to analyse divisions within an industry (Kitada/Tansey 2018: 239). Aviation and maritime transport can be seen as the opposite poles of horizontal gender segregation in the transport sector. Aviation has the highest number of female workers in the transport sector, while male workers dominate port and maritime labour. However, both sectors are characterised by high levels of racial and gender vertical segregation. These segregations largely depend on the spaces and histories of the workplaces themselves, and the labour laws that govern and navigate the workforce in these sectors. They have also changed over time due to struggles, demands from the workforce, and socio-technical and economic changes in the transport sector itself.

I will explore gendered and racialised exploitation patterns that naturalise and standardise bodily and extra-bodily characteristics. I seek to answer the second research question of how the changing labour divisions affect labouring bodies. The chapter will address the following sub-questions: Why and how are labour divisions at chokepoints gendered/racialised and how do they shape workers' exploitation on the one hand and collective struggle on the other?

The parameters used in the following sections are horizontal and vertical segregation, tokenism, and cultural othering. These are used to deepen some of the analysis of the research material and are explained in more detail below.

The incorporated and relational comparison will refer in sketches to certain historical aspects in the period between the mid-1750s and 2020. While the comparative chapter on the development of transport infrastructure began on the eve of Portuguese colonialism, this and the following chapters look at the changes in labour relations towards the end of the significant colonial period. My aim is to historicise developments in the transport sector by showing how

specific features of labour relations from this transitional period still prevail or even re-emerge.

6.1 Gendered Segregation in the Maritime and Port Sector

Throughout the history of maritime transport, it has been documented that male workers dominate the sector in workplaces characterised by heavy physical labour, male kinship, entrenched sexist and homophobic jokes and behaviours, substance abuse, and promiscuity (Nelles 2001: 73-74; Queiróz et al. 2015; Queiroz/Lara 2019). These characteristics manifest the horizontal gender segregation in the industry. At the same time, they constitute masculinist exploitation patterns that are particularly evident in the port sector.

In 1993, the Brazilian Port Law 8630/1993 was passed to end the trade union employment monopoly of port workers and break the neat link of male family ties in the docks (Galvão et al. 2017: 155). Before the government implemented this law, the port agency opened an annual season for new applicants to enter the port labour market, supported by their fathers, grandfathers, uncles, and brothers (B46 2018: item 10). This tradition of family recruitment is a feature of several ports in Europe and Latin America. David Nelles (2001: 73-74) explains this family-based connection with the close historical and biographical link between seafaring and dock labour. Towards the end of colonial ports, seafarers were traditionally younger than dockers, unmarried and without families of their own, as work at sea required more time abroad and more constant physical and mental labour (ibid. 66). By the mid-nineteenth century, however, port labour had become more flexible. In addition to heavy cargo, there were lighter and less strenuous tasks for workers who might have been gradually impaired by age, work, and possible illness. The industrialisation of seafaring on the eve of the 20th century broke the generational link between dockers and seafarers. This process created two distinct work sectors and led to the gradual isolation of seafarers (ibid. 66-69). Nevertheless, the older generation of dockers would support their male relatives, if not to become seafarers, then to join them in dock work.

6.1.1 Intergenerational Male Family Ties in the Maritime Industry

One remaining tradition in the organisation of port labour was that of working in "gangs" (McPhee 2006: 156). In a daily routine, the lead worker, who either arrived first at the port or even slept on the waterfront, would choose "his" colleagues, usually around 15 or more, to tow or unload and reload an incoming ship (Tillet 1910: 11-12; B46 2018: item 8). The first workers chosen

were brothers, sons, cousins, brothers-in-law, and so on, to ensure the family income and also to ensure that the workers could trust each other at each stage. This tradition explains the intergenerational groups that can still be found in older ports, often accompanied by a closed-shop union policy. Today, almost every dockworker in Santos or Lisbon can point to a colleague who is either a relative or a relative of another dockworker.

Unlike male workers, women always have had a complicated position in the maritime industry. While ships were given female names, female workers were largely absent from the deck, and their presence was even considered "bad faith" for a voyage (Brcko Satler et al. 2020: 61). Only two per cent of workers in the maritime sector are female, with a high concentration on cruise ships, where the majority of crew members are women, and only 0.12 per cent on cargo ships (Kitada/Tansey 2018: 242). In order to increase this percentage, research has been conducted on the obstacles faced by female seafarers. The reasons for this type of research are not so much driven by a gender equality idea (although this is the case for the ITF or the IMO), but the need for more workers for the growing maritime industry. It is estimated that there will be some 140,000 vacancies in the sector worldwide by 2025 (Brcko Satler et al. 2020).

Compared to the sea, the proportion of women working in ports is growing slowly, especially in self-driving lorries, haulage, van and crane drivers, IT, and managerial positions. Women are less present (though not absent) in manual jobs such as lashing and storage. This development points to a future trend of small segregations in port labour between precarious, racialised, and low-paid male manual workers and female so-called high-skilled workers in more secure and well-paid jobs. Globally and historically, the absence and presence of women at sea and in ports has not been a linear trend. In the Soviet Union and the GDR, a much higher proportion of women were seafarers, sailors, and port workers, which may be linked to a more supportive reproductive regime with more flexible childcare and less restrictive laws on marriage and spousal obligations, as well as to adequate training (Geffken 2015: 98; Kitada/Tansey 2018: 243). In addition, the East German state in particular suffered from labour shortages and therefore encouraged and trained women to work in manual and industrial sectors.

In other parts of the world, such as Brazil and Portugal, patriarchal laws, norms and the strong influence of the Catholic Church probably played a crucial role in excluding women from seafaring and port work due to traditional family and gender norms. Federici (2014: 30-31) gives a detailed historical account of how European inland cities gradually excluded female workers from craft, bakery, medical, teaching, and other guilds, and how the Church supported gendered exclusion from productive work. However, there are few historical studies of the development of gender segregation in the maritime sector or port cities. Looking at the emergence of the global labour force may

provide some answers to why maritime workers are predominantly male. As Federici (2014; 2020), Moore and Patel (2018), and Linebaugh and Rediker (2007), among other Marxist scholars, point out, the "double free" people did not automatically transform themselves into workers. The state and the church played a crucial role in forcing the dispossessed peasants, who lived as vagabonds, pirates, and outcasts, to sell their labour to the emerging capitalist industries in the cities and allow the metabolism of capital accumulation to work. As Federici (2014: 136-137) points out:

… [T]he introduction of "bloody laws" against vagabonds, intended to bind workers to the jobs imposed on them … and the multiplication of executions. In England alone, 72,000 people were hung by Henry the 15e VIII during the thirty-eight years of his reign. … But the violence of the ruling class was not confined to the repression of transgressors. It also aimed at a radical transformation of the person, intended to eradicate in the proletariat any kind of behaviour not conductive to the imposition of a stricter work discipline.

In England and other emerging European states, prisons and disciplinary houses were built to force people into strict temporal routines (Linebaugh/Rediker 2007: 56). In port cities such as London, male workers were dragged from these prisons directly to ships to perform forced labour as seamen, sailors, and soldiers (ibid. 61). Meanwhile, female working-class prisoners were sent abroad to the colonies, which needed reproductive bodies to ensure the re-creation of receptacles for labour power overseas (ibid. 57).

Nevertheless, women were not historically absent from ports and maritime industries, quite the contrary (Brandon et al. 2019: 9). In the historic Portuguese Empire, women organised the production and sale of fish and other goods (Abreu-Ferreira 2000: 11). While their male relatives spent weeks and months at sea or even got lost, women represented the permanent labour force as retailers in local and distant markets, transporters of seafood between ports and customers, producers of fishing nets, and more (ibid.). Portugal's comparatively liberal inheritance laws allowed women workers to inherit and manage smaller vessels on which they did not work but which provided them with an income (ibid. 13). During stormy seasons, ships had to remain in port, while fishermen, and other sailors, their children and the disabled were supported by the domestic and productive labour of their female relatives. In the port of Santos, until the 1920s, women played a crucial role in the production of ropes for ships, winches, and coffee sacks for the export of the state's most important commodity.[58] When the port was transformed from a colonial to an imperial and industrial port, these types of work and female labour disappeared. However, global transport and the accumulation of organised capital at sea would have been impossible without the steady labour force of female workers in the port (Brandon et al. 2019: 9).

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58   This is well documented in the coffee museum in Santos which I visited in March 2018.

6.1.2 Masculinist Exploitation Patterns at the Port

To move from colonial history to a lower level of abstraction, I will now examine how gender relations play out in the two ports of Lisbon and Santos. I will use interview material, as well as studies and articles by other scholars who have researched dockworkers in these two spaces.

Apart from the capitalist patriarchal dynamic of outsourcing reproductive tasks to female workers and removing them from productive work, there is another form of segregation and exploitation linked to masculinity. I observed a form of overconfidence in the physical capabilities of both male and female workers in the port sector, loud firecrackers used in protest, swearing, and an audible expression of anger against the government and management. These would be characteristics of a protest form of hegemonic masculinity, as referred to in the previous chapter. Workers expressed this by not using protective equipment, working long hours, lacking sleep, working when ill, or in physical and mental pain. As a colleague at the Lisbon port observes:

As you can imagine, we have six months of summer time, so, all the dockers that go on the shore, they don't like to wear their helmets, because it is hot, they don't like to wear … even those stuffs that are accomplished … there is some resistance to that, not only for the weather conditions but also for you know rebel rebel rebel style. They like to be rebels. It is like a statement; I am very masculine to have that… it is just stupid not to wear their helmet" (P07 2017: item 10).

Another dock worker reports a similar problem for his colleagues working on Brazilian oil platforms:

It is one of the things I tried to pass on to the workers, precisely this issue of exposure to benzene. Trying to alert workers about this exposure to benzene. And you still found a lot of resistance. You talk to the person about this product. It is dangerous. You have to use masks, the person agrees. Good! [However] interestingly, at the time [he] doesn't use the mask then. (B57 2018: item 7; own translation [AE])

These two quotes suggest that masculinist exploitation patterns are accompanied by other aspects, such as the desire to resist certain laws and restrictions even if this is turning against one's own body. There are also particular problems associated with protective gear, which may not be suitable for all seasons or work areas. However, simply refusing to use them does not address the real problems with these protective measures. Rather, the masculinist exploitation patterns discourage workers from raising the issues. The strength and concentration of all workers, who have to rely on each other, is crucial for survival in the sector. Wearing protective gear may, therefore, be seen as a sign of physical fatigue rather than a rational behaviour to protect oneself.

In the Brazilian and Portuguese ports, this masculine postulate of omnipotence has been challenged by strikes against precarious work and by workers' struggles for better health and safety at work. The masculinist exploitation pat-

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terns are flexible, porous, and fragile. Moreover, the patterns affect male and female workers differently, as discussed below.

More significant labour conflicts and struggles can challenge the masculinist exploitation patterns in a more significant and open way, alongside the daily disputes. It is not only protective equipment and working practices that are seen as a threat to "protest masculinity". Homosexual attraction or gender insecurity is presented as "un-masculine" and weakens the omnipotent male body. In the example of the port strike in Lisbon in 2016, some dockers indirectly rendered trade unionists and workers who were considered "traitors", "opportunists", or "scabs" as "gay". The strike was accompanied by other social movement networks, such as LGBTQI* groups, which openly addressed homophobia among dockers:[59]

… [M]aybe on the fifth time they [the dockworkers] said, "I think my boss can go and have it at their ass". I think someone … said: "Have you ever thought that he might have enjoyed that?" And there was this huge silence, and then he [the dockworker] just said: "Oh, yeah, sure, I am sorry." It was never used again. And this was really important. (P15_1 2017: item 16)

Challenging sexualities and gender relations played an important role in the 2016 dock strike. The views of the workers, activists, and academics involved are divided on the extent to which such discussions and challenges were central to winning the 2016 port strike in Lisbon (P27 2018: item 2). However, informants agree that the strike and the solidarity networks that developed around it repeatedly challenged sexist and homophobic attitudes and gender relations in the port.

The boundaries between being seen as masculine and not masculine are fragile and tense. In the quotes above, male dockers criticise other "rebellious" and "masculine" colleagues. While some workers refuse to wear helmets and masks, work too many shifts, and try to appear strong and healthy (despite being overworked), other workers question these behaviours. Often, they have experienced accidents and the loss of colleagues and family members on the waterfront, or they feel uncomfortable with gendered ideas and norms about

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59   In 2016, the film "Pride" was released. It tells the story of a British LGBTQI* group in the 1980s who decided to support the miners' strike in Wales. After witnessing much police repression during their own Pride parades, they concluded that the police attacks on the miners were of the same authoritarian nature as they had experienced. They decided to express their solidarity, which they eventually did by raising money for the miners' strike through solidarity funds, concerts and demonstrations. In return, the miners sent unexpected support for the next Pride parade to protect the LGBTQI* marchers from police attacks. The mutual solidarity film was released in early 2016 and struck a chord with young activists and students in Lisbon. LGBTQI* groups such as "Panteiras Rosas" were inspired by the film. Interested in doing the same kind of solidarity work, they approached Lisbon dockworkers, who were at first very surprised by their support. In contrast to the British example of the 1980s, it was not police repression that linked the two movements, but the impact of austerity and precarious work.

heterosexual and masculinist standards (P13_1 2017: item 75; B39 2018: item 20; P33_2 2019: item 16; B40 2018: item 12; B57 2018: item 8).

Masculinist exploitation patterns in ports seem to fulfil two functions: First, they create trust in an accident-prone sector by projecting an image of strenuous muscular strength within the workforce. Workers have to trust in their own and their colleagues' athletic abilities in order to survive. Since port workers in Portugal do not receive adequate training in hygiene, health, and safety (this is not the case in Brazil, as we will see), precarious port workers in particular have to put all their hope in their physicality. Secondly, this image is not just a means of self-protection. It is also a means for the capitalists to exploit the workers even more. The workers do not dare to criticise the conditions, the overtime, and the overload, because it is characterised by endurance and close to a military agreement. Their bodies can be exploited more and longer. The use of drugs, anti-depressants, and alcohol is a means of silencing muscular pain, fear, trauma, and depression. One dock worker explained this survival strategy as follows:

Because people are tired, because people are worn out, because these people have accidents, because people have almost accidents. It's also in the law, it's "quasi accidents", and the companies don't care. These workers are exhausted, so exhausted. (P33_2 2019: item 2; own translation [AE])

According to the unions, traditionally port companies in Portuguese ports rarely carried out drug testing. However, when the Portuguese dockers' union SEAL started to set up its structures in ports such as Sines, unionised dockers reported that they were suddenly sent for drug tests more often than non-unionised workers (P19_1 2017: item 26).

6.1.3 Female Workers within Masculinist Exploitation Patterns

While the masculinist exploitation patterns target male workers in the port, it also affects the small number of female dockers. The "drama of sexual difference", as Butler (2011: 22) calls it, is not only played out on the site of the body, but is also linked to and inscribed in the spatial site of the workplace.

In Santos, female workers accounted for about 13.5 per cent (about 30 people) of the total port workforce in 2012. The number is gradually increasing each year (Nogueira 2016: 813; B39 2018: item 20). In an in-depth study of female dockworkers in the port of Santos, Claudia Mazzei Nogueira (2014; 2016) collected statements describing the (violent) experiences of attempted spatial exclusion. Particularly at the beginning of their careers, female dockers were literally addressed by male dockers as being in the wrong re/productive place when they were told to "go home and wash the dishes" (Nogueira 2014: 134; own translation [AE]). A female dockworker reports that she and her two other female colleagues were repeatedly "mistaken" for prostitutes (B56 2018).

Both experiences relate to the representation of women's bodies as belonging to the reproductive sphere. Another worker recounted her experience of being beaten up because she asked another male port driver, who had blocked her van with his parked vehicle, to move it (Nogueira 2016: 815-816).

In my research, a worker at Santos reported that more women had entered the physically demanding area of lashing. However, this has led to conflicts among dockers:

With access to the company, you go to a contest, a test. And then the first placed will rise to the position. In the case of this category of lashing, there is a physical test of strength to see if they passed … And then several women passed and entered that charge. (B39 2018: item 6; own translation [AE])

… [I]n the last public recruitment round that was held, women began to access this category of workers that are lashing, in which only men existed. And then a conflict began to rise because of physical strength, they alleged. "Women wouldn't be able to tie those cables and pull a ship", which is literally what they do. (B39 2018: item 4; own translation [AE]).

The masculinist exploitation patterns exclude and challenge female or non-masculine workers and their bodies. At the same time, female workers feel pressured to follow a masculinist trait of working competitively, quickly, and reliably. A female dockworker from Santos in Nogueira's (2016: 816; own translation [AE]) work stated:

Because of the prejudice, I had to work, and do much better than the men in order not to be the victim of mockery. … Currently, there are 30 drivers who work with me … We are also more careful, attentive, and we break the trucks less.

This statement emphasises that the physical and mental exploitation is even greater for workers who are either stereotyped as non-male or female in order to work more, following a neatly intertwined pattern of patriarchal masculinity and capital accumulation through physical labour.

In the 1970s this phenomenon was coined "tokenism" (Zimmer 1988: 64), meaning that subordinate or minority groups are marked by physical differences and are, therefore, more visible than the dominant group (ibid. 66). Initially, tokenism was introduced by Rosabeth Kanter (2006) as a numerical problem: the smaller a particular social group is in a workplace, the more visible its members are and therefore more exposed to pressure to overachieve, which can lead to underachievement due to stress. However, as Lynn Zimmer (1988: 67-68) points out, tokenism cannot be used as a concept free from structures and power relations. A number of empirical studies suggest that male workers and their bodies are less likely to experience forms of bullying or occupational stress in predominantly female work sectors. On the contrary, they may even advance to become managers or leaders of workers (ibid. 70). Conversely, disabled, racialised, and/or female workers in predominantly white and male sectors instead suffer from traumatic and exhausting experiences, which J Shim (2021) has recently termed "token fatigue". This fatigue results

from the constant pressure to overachieve and experience specific forms of discrimination. But it is also due to the time it takes for racialised, gendered, and ableist workers to digest and recover from their experiences.

In the case of the female port workers in Santos, there is a common biographical aspect: The longer the workers worked in the ports, the less they experienced harassment or discrimination. This process is related to what I discussed earlier: There is not only a historical and spatial embedding of power relations that affect the body, but also a biographical period that changes the physical experience of power relations in the workplace. When these "weaker" or "non-masculine" workers have proven their reliability, discriminatory statements and harassment more or less disappear (Nogueira 2014: 133). At the same time, however, when asked about domestic work, roles have remained the same. Despite working fulltime and night shifts, female dockworkers in Santos do not experience additional support or a more egalitarian division of labour in reproductive work. As one dockworker in Nogueira's (2016: 817; own translation [AE]) study points out:

When I get home, there is no excuse at 7:30 in the morning. My husband asks me to prepare breakfast for him.

In general, the testimonies of dockworkers in Santos point to an experience of initial barriers to entry into dock work and pressure to overachieve, which allows them to settle down and experience a reduction in harassment and discrimination. However, such overachievement does not necessarily change their reproductive sphere, where they remain the central person in charge of domestic work.

The exclusion of women workers from the maritime and port sector has different reasons. In Santos, women have gradually applied for low-skilled port jobs since the federal law on free labour competition opened them up in 1993. However, applicants still have to pass a physical test to be allowed to work on the waterfront (B48 2018: item 3). For certain tasks, such as lashing and transporting goods with their bodies, women are legally excluded in Santos (Ministério do Trabalho e Emprego 2014). This legal exclusion is based on ILO Convention C127 and Recommendation R128 of 1967, which state:

15. Where adult women workers are engaged in the manual transport of loads, the maximum weight of such loads should be **substantially less than that permitted for adult male workers**. 16. As far as possible, **adult women workers should not be assigned to regular manual transport of loads**. 17. Where adult women workers are assigned to regular manual transport of loads, provision should be made-- (a) as appropriate, to reduce the time spent on actual lifting, carrying and putting down of loads by such workers; (b) **to prohibit the assignment of such workers to certain specified jobs, comprised in manual transport of loads, which are especially arduous**. (ILO 1967b; texts highlighted by the author [AE]).

This recommendation genders the task of lifting itself. It prevents female workers from performing the tasks, without (at least here) focusing on other

aspects of the body, such as the role of impairments, illnesses, skills, and training. In contrast, however, R128 emphasises that:

Any worker assigned to regular manual transport of loads should, prior to such assignment, **receive adequate training or instruction in working techniques**, with a view to safeguarding health and preventing accidents. … Such training or instruction **should include methods of lifting, carrying, putting down, unloading and stacking of different types of loads**, and should be given by suitably qualified persons or institutions. (ILO 1967b; text highlighted by the author [AE]).

Despite being published in the same year, the two statements contradict each other. This also leads to conflicting developments in gendered port work around the world. In the Canadian port of Vancouver, for example, the focus is on training rather than gender differences. Female dockworkers in the Canadian port in Vancouver do lash and are integrated into the training programme. As one interviewee explained:

When young dockworkers are brought in recruited into our workforce, women are trained in lashing. And we actually have some fantastic young women who actually love lashing. But what they do is they support each other and they've learnt ways to do it. And through balance and through execution of the movement than sheer physical force. And they are experts and they will lash at the same rate as men. (UK29 2018: item 23)

This statement underlines that manual labour is not solely operated by physical strength[60] but even more by specific techniques. Apart from certain physical circumstances, such as pregnancy, illness, congestion, or other impairments, there is no reason to deny workers the task of lifting and lashing. Convention 127 reproduces sexist stereotypes that are legally inscribed in ports around the world. Conversely, in the case of female port workers in Vancouver, Canada, the interviewee pointed out that they were less prone to muscular or spinal injuries because they were more open to working in teams to lift heavier loads or using techniques with less unhealthy effects on the body.

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60 I will not go into detail here about how gendered physical differences are made from an early age, but I would like to refer to the impressive studies by Karin A. Martin (1998) and Iris Marion Young (1980), in which they point out how gender is literally physically embodied from an early age through the (dis)encouragement of repetition of certain tasks and muscular (dis)training, which prevents female rendered people from a certain physiological knowledge and shape. Furthermore, Sébastien Rioux's (2015) study on working-class women, motherhood, and food distribution in the late nineteenth and early twentieth centuries reveals how wage differentials between male and female workers enforced a family food regime that supported the family wage-earning male workers to the detriment of the often hungry and therefore physically impaired female workers, who became the "weaker worker" due to malnutrition.

Excursus: Gendered Lifting Regulation and the ILO

The history of protective health and safety measures has been crystallised in ILO conventions and recommendations, among other institutions, and thus continues to play a role in preventing women workers from accessing certain occupations (Koch-Baumgarten 1998: 288). As Sandra Whitworth (1994: 394) points out, from the beginning of the twentieth century the international labour movement was divided between "protectionists" and "equalityists" with regard to women workers. The protection of women's bodies was part of the progressive feminist working-class struggles for maternity leave and protection for pregnant workers. This was extended in two ways: On the one hand, women workers were primarily reduced to their bodies and possible "childbearers" (ibid. 397), regardless of their age, fertility, and chosen gender. This led not only to the gendered regulation of lifting, but was also extended to night work, work with benzene and other hazardous materials (ILO 1967a; Whitworth 1994: 394-398). Against these regulations, equal rights campaigners argued that

> … [E] stablishing special protective measures for women meant that employers would be less likely to employ them and thus they threatened women's equality on the labour market. Protective measures, moreover, detracted from the overall aims of labour legislation by protecting only women workers instead of all workers. (Whitworth 1994: 394)

While female workers are targeted by often paternalistic protective measures and excluded from certain tasks, working hours (such as night shifts), and sectors, male workers and their health and safety risks are obscured.[61] Instead of demanding protections for the whole working class, such as teamwork in lifting, low-weight lifting regulations, protective gear against hazardous substances, breaks, no or minimal night shifts, and more, for the whole working class, the struggle was and is divided along patriarchal gender roles, with the male worker functioning as the "norm" worker and the female worker as the weaker and reproductive counterpart.[62]

In contrast, in the female-dominated, low-paid, and poorly regulated service sectors, lifting, night work, and working with hazardous materials are essential to their jobs. Dangerous substances are used, for example, in the cleaning sector. Caring for the elderly requires lifting and transporting bodies well beyond the maximum 55 kilogramme required for male workers in industry and transport. This is also relevant when considering female-dominated cabin crew and social services at airports. Night shifts in hospitals, restaurants, and

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61 What is also made invisible is that, despite regulations on night work, women, especially in the Global South and the Extra-Economic Zones, largely work night shifts, sometimes under semi-legal conditions, which increases their insecure working situation (Politakis 2001: 407).

62 However, as George P. Politakis (2001: 404) argues, the ILO's protective measures were initially seen as a step forward in improving working conditions, particularly in relation to night work, for the whole working class regardless of gender.

retail shops affect women to a large extent, not including domestic reproductive night work after work.

While protective measures have been targeted at women in the industrial and manufacturing sectors, they have largely been overlooked in service occupations. Working conditions related to lifting in the social and service sectors are not part of the discourse or the ILO recommendations and conventions. Meanwhile, the low-paid, often racist service sectors remain below the protective radar. This shows once again the powerful role of patriarchy and white supremacy embedded in capitalist structures and how far such divisive and oppressive norms have reached into the international labour movement (Whitworth 1994: 394; Koch-Baumgarten 1998: 287; Politakis 2001: 406).[63]

Gendered exclusion from access to reproductive health therefore affects all genders and their relatives and children, albeit at different times and in different ways. The following example illustrates the problem of gender differentiation in reproductive health protection. As Whitworth (1994: 396) critically observes, while women were excluded from certain jobs involving hazardous substances, men were still exposed to them:

> As early as 1860, the reproductive effects on men exposed to lead were documented with indications that their wives had a very high incidence of spontaneous abortion. More recently, lead and other substances have been linked to low sperm counts, childhood cancers, heart defects, genetic damage to sperm and chromosonal aberrations. By assuming that only women play an important enough role in reproduction to require protection, it becomes clear that men's role in reproduction does not entitle them to any sort of special consideration– they become, in effect, invisible.

Female workers are seen first and foremost as potential parents and only secondarily as workers. Moreover, the situation is reversed for male workers, who have less access to parental leave, elderly care, and domestic work, but comparatively privileged access to productive work (Whitworth 1994: 397).

In general, the gender lifting rule is a relic of the labour movement's past and is still used in some ports around the world, such as Santos. In other ports, by contrast, workers and unions consider it outdated. However, this is not so much a national issue or a question of "cultural backwardness" as it is a matter for international organisations such as the ITF and the ILO to update their regulations and push for a more diverse and less discriminatory world of work.

Compared to Brazil, there is little research on female dockworkers in Portugal. In Lisbon, women are still absent from the port, but in other Portuguese ports, such as Setúbal and Sines, the female workforce has increased slightly (P07 2017: item 2). The newspaper article by Sara Dias Oliveira is the only viable source of information on their situation at present. Out of a total workforce of around 2,000 dockworkers, only 29 are women and they work in two

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63 As Politakis (2001: 406-407) shows in his study on night work, the gendered ILO recommendations and conventions have been discussed and changed several times throughout the history of the institution.

of the nine ports (Dias Oliveira 2019: 25). In this article and an additional interview I conducted with a female dockworker in a port in southern Portugal, no experiences of gender-based harassment or discrimination were reported. The informant is the niece and granddaughter of dockworkers, and when her uncle retired, she was able to register as the first female dockworker in her family (ibid. 24). Despite having three children at a very young age, one of whom still lives at home, she works full time on the docks. Her main concern was the lack of training she and her colleagues received (P36_1 2019: item 9). In addition, she has been living on daily contracts for more than nine years and is concerned about the increase in accidents in her workplace (ibid. item 11), an issue that will be explored in the next chapter. When asked about domestic work, she said

When my husband would not have a regular job in general, he would have to care for my daughter. … I already had my share here. I worked here pregnant. I have been here for nine years of my life; five, six years ago, it was unthinkable that I would get pregnant because I am very independent. I like my work and when I have my money. I don't like being at home. I don't like, well, even those few days to relax. … I've been working since I was 12 and had another marriage of 12 years and worked nights because the man [another partner] did not support me. … It was unthinkable to stay at home [just] because of my daughter. No, there are kindergartens for a reason. (P36_5 2019: item 9)

Her current male partner is mainly responsible for caring for their daughter and does most of the reproductive work, as she has already worked while pregnant, which has put a double physical strain on her. She also emphasises her independence, which is strongly linked to her job, flexible shifts, and enough money, and she does not ask for reproductive time for herself. She recently earned more than her partner (P36_5 2019: item 7). In the way she highlights her share and the duality of being pregnant and working as a dockworker, the masculinist exploitation patterns reappear. She has not only been working as a dockworker, but as a pregnant dockworker, which underlines a superiority over her male colleagues and her husband: producing and reproducing at the same time.

There are several reasons for the discrepancy between this statement and those made by dockworkers in Santos about their experiences of violence and oppression. Firstly, there is a scarcity of in-depth interviews from Portugal that would allow more time to discuss possible acts of discrimination in depth. Second, zooming back to a broader level of abstraction, Tindara Addabbo et al.'s (2015) study on European female workers and the economic crisis from 2007 to 2014 highlights the more general independence of female workers in Portugal compared to other European states. More than 65 per cent of the female population has a regular job, while the gender pay gap was at a historic low of 6.5 per cent in 2012 (the EU average was 11.2 per cent) (ibid. 452). These broader economic factors are at least indicators of higher self-esteem among women workers in Portugal.

In addition, the liberal inheritance law in Portuguese society, as briefly discussed in section 6.1.1, may also have given women greater economic independence and bargaining power. Finally, the intra-European migration of male workers from Portugal to other places often left female workers in situations where they became the sole breadwinners in the household. However, more concrete research is needed to get a more complete picture of the different perceptions of female dockworkers in both Lusophone countries.

In conclusion, I argue that in the port sector, the masculinist exploitation patterns appear to function as a survival mode in a hazardous work environment with increasing work intensification and pressure. It can be seen as a shortcut in dealing with a significant physically exploitative work environment. However, this shortcut is fed by patriarchal and sexist norms and ideas about the ideal male and female body. As Ulrich Brinkmann (2011: 147; own translation [AE]) points out, "insisting on health protection … does not fit into the (mostly) male postulate of omnipotence".

Physical characteristics are naturalised, reconstructed, and re-centred. The body and bodily aspects are used to justify a gendered form of vertical segregation, labour division, and exploitation of workers in the maritime and port sectors. Horizontal segregation has historical, social, and economic roots in the cradle of capitalism, which has since been transformed and changed. But the traces are still visible in various (global) institutions, laws, norms, patterns, and embodied divisions of labour. While workers and their bodies have been subjected to this naturalised patriarchal capitalist form of exploitation, degrading them to mere parts of machines, workers and activists have historically challenged such patterns, labour divisions, and the binary and strictly gendered division. Patriarchal structures alongside a capitalist regime of accumulation prevent female workers from productive and often better paid work, or male workers from reproductive work, by confining both categories of embodied labour to the productive or reproductive sphere.

6.2 Racialised Segregation in the Maritime and Port Sector

In contrast to gendered segregation, racial segregation in the maritime sector as a whole is primarily vertical. Unlike women, racialised workers are not prevented from entering maritime and port job markets. However, they are mainly employed in manual, precarious, dangerous, and low-paid jobs.

6.2.1 Racialised Exploitation Patterns in the Maritime and Port Sector

At a broader level of abstraction, racialised exploitation patterns do not derive exclusively from physical characteristics. However, their impact on the division of labour targets workers who embody specific jobs and their physical and mental demands. Positions as officers and captains on ships, crane drivers, I.T., and management are occupied by non-racialised or less racialised workers. In contrast, a greater proportion of workers from the Global South work in manual and lower paid jobs (McKay 2021: 2). The division of labour deepens the physical exploitation of the body while paying less for reproduction.

Steven C. McKay's (2021) study on the various forms and effects of racialised seafarers notes that 70 per cent of the world's 1.7 million seafarers work in multinational crews. Each nationality plays a different role (ibid. 2). The Philippines and China supply the majority of seafarers (Zhao/Amante 2005: 535).[64] As one ITF informant explained:

So, if you are on a typical foreign going boat carrier containership, you may have a crew of 17 or 18 people; two or three may be Ukrainian, and the rest might be Philippine. Philippinos are on an average wage somewhere between 700 and 1.200 and 1.400 Dollars a month maximum. The officers from Ukraine may be on about 3.000 Dollars a month. That's basically to avoid taxation and to avoid labour laws that apply to workers from your own country. (UK29 2018: item 14).

Today, the Flag of Convenience (FOC) system mediates vertical racialised wage and labour segregation in global shipping. According to Marc Anner et al. (2006), FOC is "a de facto open global labour market" that allows shipowners the flexibility to register their ships in different states with low taxes, labour laws and anti-union policies. Since 1949, imperialist states such as Britain and the US have flagged their ships in Panama, the Bahamas, and other (former) colonial states (Cowen 2014: 45). Today, one-third of ships are nationally flagged, and most ships sail under the flag of a state whose current labour conditions appear to be the most profitable for the owner (Ruggunan 2011: 80). The FOC system produces global racialised exploitation patterns by selecting and employing workers from certain economically disadvantaged backgrounds to perform precarious, dangerous and overburdened work.

As discussed below and in chapter seven, dockers have challenged legislation that attempts to increase outsourcing, such as the European Port Package or the labour reform in Brazil. One driver of this challenge has been the concern that ports, in addition to ships, could become extra-legal zones. Opening up port labour to a racialised global labour market will lead to a new race to the bottom in wages and working conditions. Despite the rupture in the histor-

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64   See for more information also UNCTAD "World seafarer supply 2021",
      https://unctadstat.unctad.org/wds/TableViewer/chartView.aspx [Access: 01.12.2021].

ically close intergenerational relationship between younger seafarers and older dockers, port and seafaring are still deeply intertwined.

Currently, tasks such as lashing (locking and unlocking containers) are sometimes illegally outsourced to seafarers to save time in port. This outsourcing can lead to fatal accidents among seafarers. In many interviews, dockers link fatal accidents to precariousness, lack of labour rights, training, and FOC, which exploits mainly workers from the Global South (P07 2017: item 10; UK17 2017: item 26; UK29 2018: item 14; UK31_1 2018: item 61; B58 2018: item 29). However, container handling by untrained seafarers can also cause accidents for port workers. Loosely stacked containers can also fall onto berths, trucks, and people.

6.2.2 The Racialised History of Portuguese and Brazilian Maritime and Port Labour

The history of maritime transport is linked to a global racialised division of labour. Racialised workers played a crucial role in the construction of the maritime capitalist system of transport and accumulation.[65] In colonial ports across the ocean, the knowledge of fishermen and divers from South West Africa would become indispensable to colonialism and the slave trade.[66] Black enslaved dockworkers in South America and the Caribbean often worked as pilots. Their skills in navigating shallow waters were necessary for naval and merchant ships to reach "safe haven" (Dawson 2013: 164). By taking command of incoming ships and overruling a white captain, the racial hierarchy between white enslavers and black indentured servants was turned on its head, as pilots necessarily took command to navigate the ship (ibid. 169). In Brazil, indigenous and black fishing communities developed alongside the ports, known as "jangadeiros", who used their fishing boats to connect the port land and the anchoring ships, loading and unloading goods and incoming enslaved people

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65   As mentioned in chapter three, the Portuguese Empire first used enslaved people in its European territory as much-needed labour for its farms, and emerging rice fields than as porters and dockworkers (Vogt 1973b: 2; Carmo et al. 2020: 45). Thus, on the eve of capitalism in the Lusophone world, stevedoring was the work of enslaved and racialised people.

66   Some of the most notable studies on this topic come from Kevin Dawson (2010; 2013). He traced the transfer of knowledge between West African fishermen and pearl divers during the emergence of colonialism and the period of the slave trade. At this time, the experience of enslaved West Africans with shallow waters, reefs, etc. was essential for the emerging global transport network. Moreover, because West Africans were trained in diving and swimming, they survived more accidents at sea than white sailors and even saved white crew members from drowning (Dawson 2010: 82). Their diving skills were used to search for pearls or near shipwrecks to recover treasures and other items belonging to their "masters" (ibid. 81; 111).

(dos Santos Gomes 2015). They also distributed the bodies of enslaved people and goods along the coast and rivers to different ports.[67]

Overall, black enslaved workers were constantly present in the distribution networks and the maintenance of other enslaved workers. Their communities grew with the Brazilian port cities and were affected by disease, rapid changes in transport technologies, and infrastructure, uprisings, and struggles. By the mid-19th century, Brazil had the largest slave economy across the Atlantic (Hébrard 2013: 48). As in all empires, enslaved people were treated as chattel and the property of their owners (Dannreuther/Kessler 2017: 365). However, their conditions in colonial port cities such as Santos were very different from those in plantations and mines and included a greater degree of freedom of movement for (male) sailors, tugboat workers, and dockers (Dawson 2013: 166; 181; Read/Zimmerman 2014: 410). These different working and living conditions were increasingly used to organise against slavery (Machado 2006: 267).

In addition to the spatial and racial divisions of labour, there is also a gendered dimension: Building on the capitalist division between productive and reproductive labour, male workers had greater opportunities to become sailors, dockers, pilots/tugboatmen, barbers, and porters. They had more independent mobility, geographical knowledge, and opportunities to connect with other workers (Read 2012: 4; Read/Zimmerman 2014: 409). Female enslaved people, on the other hand, worked predominantly in domestic occupations in closed units with little opportunity for independent movement and a high degree of dependency on a family, caring for and nurturing either their own or/and the enslavers' children (Read/Zimmerman 2014: 408).

The abolition of slavery significantly changed labour relations and the division of labour in stevedoring. In port cities such as Ceará, the abolitionist movement was joined by the jangadeiros, who increasingly refused to transport enslaved people along the rivers (dos Santos Gomes 2015). The movements in the port cities grew strong through acts of sabotage, uprisings, strikes, and the liberation of enslaved people in hiding and on the move, similar to the "Underground Railroad" in the United States. As a result, slavery was abolished in these port cities a few years before 1888 (B45_1 2018: item 8).[68] Abolition

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67 Another important maritime profession was the "barbeiro" or barber, which from the 18th century increasingly included black enslaved medicine men and women who worked on slave ships Carvalho Soares (2013: 217). Compared to the French, Dutch, Spanish, and British empires, the Portuguese and later the independent Brazilian state used barbers until the abolition of slavery in 1888. The slave trade was banned in 1850, but continued illegally (ibid. 221). Before, but also during this period, barbeiros had a specific role in healing and maintaining the dehumanised, de-socialised and de-territorialised commodified bodies as well as the sailors on board (Dannreuther/Kessler 2017: 375), often with non-standardised West-African medical techniques (Carvalho Soares 2013: 218).

68 Ceará was the first city to officially abolish slavery, in 1884, followed by Santos in 1886.

transformed the work of enslaved people into precarious and unstable wage labour. The new law denied formerly enslaved people the right to own land for self-sufficiency. They were therefore forced "to sell their labour, and often did so to their former owners at prices below subsistence level" (Leubolt 2015: 64). The aforementioned family ties and gender relations allowed workers to remain in, or temporarily migrate to, port cities despite unstable and insecure conditions. In addition, ethnic ties were another link between workers to select each other for a gang (Queiroz/Lara 2019: 50).

In Santos, the Black ports played an important role in the labour movements of the Brazilian state from the end of abolition in 1888. Formerly enslaved people still working as dockers set up a kind of closed shop system to keep labour contracts and wages among themselves. Their wages were low. The quilombos near the docks, where formerly enslaved people could hide and live near the port, were once protected by wealthy abolitionists. These "protectors" now needed the land for additional warehouses and coffee plantations, as they needed the formerly protected enslaved people as cheap labour (Machado 2006: 250; McPhee 2006: 156). In addition, the position of black workers in the ports was undermined by the arrival of European migrants (Brandon et al. 2019: 16). Black dockers organised their own unions to support themselves and their families (McPhee 2006: 152).

However, as European migrant workers were primarily influenced by syndicalism, anarchism, and socialist ideas, they quickly transformed the coffee hub into the so-called "Red City" or "Brazilian Moscow" (Da Silva/Gitahy 2013: 27). Strikes broke out among dockers, artisans, and construction workers for higher wages, better infrastructure, and housing (ibid. 19). Santos became the cradle of the Brazilian labour movement. Initially, the new class of coffee and transport entrepreneurs used the black dockers, their links, and poor social conditions against the strike. Now the marginalised black dockers became strike-breakers (Machado 2006: 248). During the first general strike in the port of Santos in May 1891, about 100 workers were gathered and supported by about 100 troops to work in the warehouses and undermine the strike (ibid. 272). This division between black and European immigrant workers created a serious backdrop for the movement, which only later recovered with the demand for the same wage that the dockers had received six years earlier (ibid. 273).

But the black dockers' movement and the new European workers also found common ground and organised a joint and influential trade union movement that had significant control over working conditions and employment. The dockers were not just active trade unionists. From the 1930s to the present day, they developed labour movement personalities who were instrumental in the

creation of labour laws, crystallising the interests of their class into legal infrastructures.[69]

Portugal officially abolished slavery more than a hundred years before Brazil (Carmo et al. 2020: 54). In Santos and Lisbon, daily or ship-to-ship contracts became the standard form of wage labour after the ports were transformed from colonial to industrial centres. While families remained in the countryside to work on farms and in the fields, male workers in particular commuted between the countryside and port work (Queiroz/Lara 2019: 59). James Sweet (2013: 242) points out that even before the abolition of slavery in Portugal, black porters and stevedores worked in chained gangs in the Lisbon docks. The history of formerly enslaved and black dockworkers in Lisbon is largely unknown (ibid. 234-235).[70] However, as Isabel Castro Henriques (2019: 13) shows, according to paintings in the Lisbon City Museum, colonial port labour was still partially based on Black workers until the nineteenth century. Most of the black inhabitants of the former Lisbon district of Mocambo "worked along the riverfront, where small shacks dotted the terrain from as far back as the sixteenth century" (Sweet 2013: 239). Until the reconstruction of the Port of Lisbon at the beginning of the twentieth century (described in Chapter 4) ships could not dock directly in the dock. As a result, more than 800 boats were used to transfer people and goods between land and steamships (Pinheiro 2018: 5). Black male workers unloaded ships, while black female workers, known as "calhandreiras", transported domestic waste and the faeces of their (still existing) masters (Castro Henriques 2019: 13). In this way, black female workers literally incorporated the substitute for the non-existent sewage system of the feudal and mercantile capitalist classes (Sweet 2013: 240).

The rebuilding of Lisbon's port at the end of the 19th and beginning of the 20th centuries wiped out both types of work: On the one hand, to minimise diseases and, on the other hand, to allow a faster turnover time of goods, the reconstruction of the port included a new sewerage system and a landfill to allow ships to dock directly at the water's edge (van Dijk/Pinheiro 2003: 95; Pinheiro 2018: 11). The work on the barges and the transport of domestic waste disappeared, as did Lisbon's tradition as a black port.

This reconstruction is a prime example of how labour is embodied, and how its relations and divisions of labour are penetrated and transformed by the spatially imprinted infrastructures of capital circulation and accumulation. As the port was "modernised" to meet the acceleration of global transport and the capitalist need for faster turnaround times, a whole tradition of black wage la-

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69   For example, the first black Brazilian federal deputy elected in 1946 was the dockworker Osvaldo Pacheco from Santos (B58 2018: item 8), who later influenced Brazilian port labour legislation (CPDOC – Centro de Pesquisa e Documentação História Contemporânea 2009).

70   There are recent ethnographic, historical, and archaeological studies on formerly black communities in Lisbon; see, for example, Fernando Arenas (2015); Elsa Peralta and Nuno Domingos (2019); Miguel Carmo et al. (2020). It is likely that in the coming years, the history of Lisbon as a formerly Black port will also be revealed in greater depth.

bour was erased. The reconfiguration of the port of Lisbon ran parallel to the Portuguese empire's new ambitions to colonise African regions, now known as Mozambique and Angola (Castro Henriques 2019: 28). The new "conquerors" introduced "modern" discourses and racist campaigns about the "inferiority of the African people". Thus, until the progressive revolution of the 1970s, there was an erasure of black history, knowledge, and traces in the "homogeneous national Portuguese culture". The history of black Portuguese citizens and workers has only recently been rediscovered and made visible (Sweet 2013: 234-235; Peralta/Domingos 2019: 256).

The racial segregation in both ports changed as a result of racist colonialist campaigns and the spatial reconstruction of the port and its division of labour, as in Lisbon. It was eventually dismantled by joint struggles by dockers of all ethnicities, as in Santos. But even if the dockers in Lisbon and Santos have challenged racial segregation, there are still Portuguese and Brazilian ports where segregation between crane drivers and stevedores exists on the water-front. In the Portuguese port of Sines, for example, there is segregation between crane drivers, who are literally and physically at the top of the occupational and income scale, and stevedores, who earn around 500 euros a month (P13_1 2017: item 18). The segregation is racialised between urban workers, who get better jobs and health and safety protection, and rural workers, who have never worked in any industry before and have worse conditions and lower pay. A dockworker reported on the division of labour in Sines (ibid.):

They lived from the lands, … and when they put you inside the terminal with big cranes, big ships, all the lights inside the crane, the cranes and everything, for 500 Euros? … And you see the competition. It is like a virus, you know. You start this; it spreads like a virus, 500 a month! … They bought their crane recently to deal with big ships. And if you look inside the terminal, they are all dressed up. Good clothes, good helmets, good boots, good equipment. Good infrastructures. But the workers [snips with fingers], some workers, … the crane drivers are being fed for working that system. But from downwards [takes a break], if you reach there, you don't have the liberty to question things.

Particularly in older ports such as Santos and Lisbon, labour traditions have enabled workers to challenge segregation and inequalities in wages and health and safety protection. These traditions have not yet been implemented in emerging ports such as Sines. There is a regression to 19th century racialised labour segregation and racialised exploitation patterns that divides workers according to their embodied occupations. This is being challenged by workers, particularly from other older ports, who see such rollbacks as a threat to their newly won and implemented labour traditions (P33 2017: item 18).

However, even in ports where such segregation has been contested thanks to generations of labour traditions, there are still elements of racialisation. At the same time, despite the racialised division of labour at sea, there are also commonalities between workers, particularly health and safety concerns,

which unite workers in common struggles. I will look at divisions and unity in the following three sections.

6.2.3 Cultural Othering and Racialised Gender Biases

To look specifically at how racial segregation plays out in the two ports of Lisbon and Santos, I turn to my interview and research material to discuss possible remnants of the broader story above. Racialised labour segregation is generally less prevalent than in the maritime sector. It also appears to be less influential in the workforce than the gender segregation discussed above. In the Brazilian port of Santos, a rotation system allows workers to change position (from working on the ship to working on the crane and vice versa) and location (for example, from the soya terminal to the gas terminal). In Lisbon and other Portuguese ports, there are daily contracts and flexible working hours for all workers, regardless of gender, with no, at least to me visible, specific racialised exploitation patterns.

However, in the interviews with dockers, related trade union activists and family members, racialisation was still used in two ways. Firstly, it appeared as a form of self-othering, i.e., to explain certain political phenomena in terms of the essentialised specificity of "Portuguese" or "Brazilian" "culture". Such arguments were mainly used when referring to a deficit.

A Portuguese dock worker put it this way:

We are always like all the good Portuguese; we are always praying for something not to happen. And I think we need to stop that and have another kind of education inside the ports for health and safety. (P13_1 2017: item 4)

Another port worker from Brazil commented on the lack of reporting of health and safety incidents to the unions:

They [the dockworkers] don't go there. They say that because most speech therapists are women. So, they don't go to the union and charge the union; you have to go there and talk to us. They don't do it. It's Brazilian culture. (B57 2018: item 20)

In the first quote, the lack of health and safety is linked to a supposedly "Portuguese" national culture. In the second, the informant associates the lack of information about health and safety violations with a sexist prejudice and equates this prejudice with "Brazilian culture". This self-othering, or the assertion that a certain backwardness is linked to the nation, obscures other power relations and reasons for the lack of health and safety management.

A second way in which racialisation has been used is in the form of cultural degradation and othering. For example, when I asked non-Brazilian trade union officials why they thought women were not allowed to do certain jobs in the Brazilian port of Santos, I received the following response:

You've got different cultures in Africa, Latin America, the Arab world, they've all got different cultures, and things won't be specific to a sector. You could probably look at all sectors, and all sectors are struggling with the same issues, you know. So, you got to remember where we are, and Western Europe may not be the same thinking in Latin America or in the Arab world or where ever (UK28 2018: item 27).

Contrary to this statement, female workers are in fact prevented from performing certain tasks by the 1967 ILO Convention and Recommendations on Lifting, already mentioned in section 6.1.3. The Brazilian Ministry of Labour has ratified this Convention. It has not been amended by the ILO or the ITF to date. This cultural othering complements the self-racialisation described above. Both refer to a particular narrative of "culture", while other possible causes and solutions to health and safety problems or gender stereotypes are rendered invisible. Such racialised narratives can be a barrier to analysing the real reasons for particular problems and organising against all exploitation patterns at the chokepoints.

6.2.4 Reclaim Lashing: A Cross-Cutting International Campaign in a Racialised Sector

Despite the divisive nature of racialised exploitation patterns and divisions, there are examples of dockers and seafarers uniting, as the specific nature of exploitation on ships can endanger all maritime workers at sea and ashore. One such struggle is linked to what was discussed above about the racialised nature of FOCs. The ITF and ETF are directly targeting seafarers' working conditions and the dangerous practice of untying containers before the ship docks. The Reclaim Lashing campaign was launched in 2015. As many other interviews with dockers and ITF organisers have raised (G03 2017: item 4; UK14 2017: item 26; UK28 2018: item 20; UK31_1: item 62; P33 2019: item 21, B68 2018: item 9), lashing must be professionally organised and not outsourced to the (often racialised) ship's crew, and not before the ship has docked, even if there is time and financial pressure from the shipping company. In 2018 there was an accident near the port of Dublin, which was mentioned by several interviewees I spoke to at the time.

We just had an – we just had an accident, and we were talking about it in the meeting this morning on the docks in Dublin; it was last week. You have a German ship owner brings the ship into an Irish port in Dublin. You have dockworkers from Ireland operating the cranes that are lifting the containers on and off. And you've got Phillipino seafarers going on and doing the securing and the lashing of those containers. And they broke all sorts of regulations and normal safe working practices by lifting three containers at once. One of them came loose and smashed into the guy. Crushed them dead instantly. That's the kind of example we are talking about. There is working culture and people working under fear, people working under pressure, people working away from home for long periods of time basically to support not just themselves … and their families, but the extended family like the Phillipino worker

would be that could be the prescriptions of their parents, the medical bills, university fees, even school fees, and all of those sorts of things. That's kind of the reality, and that is why I said to you, before we went live on the recording, it's an industry that's built on silence. And trying to get to the bottom of that stuff is extremely difficult. (UK29 2018: item 14)

… [Y]ou can't take the lashing off when you are not in there; that is dangerous! And not taking out in the river. The guy got killed on Wednesday in Dublin. … There is a campaign there is a meeting in London on December the 7th we're involved in that. We're trying to reclaim the lashing back. And the IDC is involved in that. (UK31_1 2018: item 16)

The Reclaim Lashing campaign aims to secure dockworkers' jobs and tackle life-threatening working conditions on ships and in ports (UK29 2018: item 14). One informant explained that despite racial segregation and global spatial differences in workers' protective rights, health and safety concerns are a "cross-cutting" issue for port workers around the world:

People are working around big heavy machinery, and what affects one person is very likely to affect other people, right? And that's not just true within a single port; it is true between ports. So, if cargo is loaded in an unsafe way and not secured properly, that's not just a risk for the workers who are loading it. It is also a risk for the workers who are unloading it, right? Yeah, I mean, health and safety is just a cross-cutting concern among dockworkers everywhere, whether they are in very wealthy countries with very good union protection or in very poor countries with no union protections. So yeah, I know that's a really big issue, that's like, in some ways, that's the single most uniting issue for everybody, right? Cause there; it's so obviously in everyone's interest. (UK17 2017: item 26).

The specific racialised exploitation patterns of seafarers also affect dockers. They are therefore organising "cross-cutting" protests to address the issue of lashing. In 2018, the ITF and the ETF negotiated an agreement in the International Bargaining Forum on the "dockers' clause", which was implemented in January 2020.[71] It prohibits seafarers from performing dockworkers' duties and considers lashing to be a job that can only be done by trained dockworkers. However, the implementation of the Dockers' Clause coincided with the onset of the global pandemic.

Since the outbreak of Covid-19, seafarers have been staying on board ships for much longer than their contracts and their energy allowed. Between June 2020 and March 2021, up to 400,000 seafarers were reported to be at sea because borders were closed and workers could not return to their home countries, or vice versa: Shipping agencies kept them on board as the supply of new labour was blocked by various governments. The crisis led to the biggest crew change crisis in the history of shipping, causing depression, starvation,

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71   See also the press release of the ITF from 1. January 2020 – "#LashingIsDockersWork: ITF Dockers' Clause comes into force", https://www.itfseafarers.org/en/news/ lashingisdockerswork-itf-dockers-clause-comes-force [Access: 01.09.2021].

fighting, and suicide among the crew.[72] It made it difficult for the ITF to record whether or not lashing had been performed by seafarers during that period.

6.3 Conclusion: Divisions and Convergences in Port Labour

The spatialised history of racial segregation has left its mark on international maritime transport, where a racialised division of labour between workers from the Global South and the Global North still prevails. The labour regime perpetuated by the FOC system has implications for occupational health and safety, particularly for migrant workers who have few rights and protections. Knowledge of their working conditions is widespread among port workers in Portugal and Brazil. They see these conditions as a reflection of their future if port labour continues to be outsourced to global shipping and port companies.

The history of racialised maritime transport and port labour has left different traces in ports. In Portugal, the history of black dockworkers has disappeared, but there is still a lot of research to be done to uncover the tradition of black dockworkers and to find out where black workers went after the reconstruction of the port of Lisbon. In the port of Santos, the tradition of black ports remained an important part of the country's labour movement. The dockers' unions played an important role in the drafting and implementation of labour laws. They occupied land for housing in the tradition of the quilombos. They thus used the legacy of their history as formerly enslaved people or children of enslaved workers to inscribe their interests in workplaces, laws and reproductive infrastructures. A convergence of labour interests and working conditions between different ethnic backgrounds can be observed, albeit at a low level.

Today, instead, forms of naturalising "national cultures" seem to prevail among dockers, both in the ports and in the international trade union structures. These can be an obstacle in trying to identify specific problems relevant to dockers and their bodies. The most critical of these remains the issue of physical and mental safety, which the ITF and ETF have addressed through the Reclaim Lashing campaign.

In contrast to racial segregation, gender segregation is still more prevalent in the maritime sector and ports, where female dockworkers are scarce or, as in the case of Santos, experience overt forms of harassment and gender-based violence. The experience of such forms of oppression, directed at their very gendered bodies, can also affect the occupational health and safety of these workers, leading to "token fatigue" and congestion. Furthermore, in Santos,

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72   See also the press release of the IMO from 19 March 2021: "COVID-19 crew change crisis still a challenge", https://www.imo.org/en/MediaCentre/PressBriefings/pages/Crew-change-COVID-19.aspx [Access: 01.09.2021].

female workers are still prevented from performing certain tasks, such as lashing containers. Such experiences and prevailing power structures can be barriers to organising better working conditions, reproductive rights such as toilets, childcare, canteens, health and safety, and wages for all workers.

6.4 Gendered Segregation in Aviation

Before entering into the specific racialised, gendered, and sexualised history of the aviation workforce, it is worth starting with a disclaimer about the labour division at different chokepoints: ports and airports. The labour division in the maritime industry between seafarers and dockers is largely spatially exclusive. This means that seafarers rarely enter the port or only leave the ship and travel to the nearest airport to fly home or to the next job. In contrast to the pre-containerised and accelerated global transport chains, seafarers today remain on their ships during the relatively short loading and unloading periods (B66 2018: item 21).

Conversely, flight attendants in the aviation industry often have to perform tasks at airports. Particularly on low-cost airlines, cabin crew organise the final check-in, search, and call for lost passengers and luggage, and spend time at airports waiting for their next flight. Airport and cabin work are more difficult to distinguish from seafaring and dock work, apart from typically male occupations such as pilots and ground controllers.

On the surface, the aviation sector contrasts sharply with the maritime and port industries in terms of gender segregation. While the maritime and port sector globally includes a tiny minority of female workers, it is estimated that between 20 and 40 per cent of the aviation workforce is female. The sector therefore has twice as many female workers as other transport sectors (Harvey et al. 2019: 1-2; Seligson 2019: 7). Aviation is vertically segregated in terms of gendered and racialised embodied labour. Male pilots still dominate the commanding positions in aircraft, with only six to ten per cent of pilots being female (Seligson 2019: 6). Globally, male and white workers still make up the majority of mechanics and air traffic controllers. Regionally, however, female workers are in the majority in some states, such as Greece or Jamaica (ibid.).

As such, aviation is a rapidly changing sector of work, making it difficult to track accurate figures on levels of segregation. The Covid-19 crisis and its direct impact on the aviation industry have again changed the workforce, which is another obstacle to obtaining accurate figures. However, the general trend is that, regardless of positionality in the sector, there is an increase in atypical and precarious work, which predominantly affects female workers (Harvey/Turnbull 2015: 312). At the airport, most check-in workers are female (around 70-80 per cent) (Rosskam 2018: 23), and, as mentioned above, some

are also flight attendants. Cleaning staff are predominantly female and often racialised. In addition, a growing number of mainly female social assistants transport elderly and disabled people (Da Silva et al. 2017: 144; P22_2 2017: item 6). The growing group of call centre workers is also predominantly female. It has increased as a result of attempts to eliminate staff in check-in services and to transfer ticket purchases and check-in to customers and their online skills (P32 2019: item 62).

As noted in the previous sections, the aviation sector and its development have their origins in colonial history and the need to cross large colonised territories, secure national borders and suppress anti-colonial or separatist uprisings. Brazil and Portugal were relatively peripheral players in the First and especially the Second World Wars. They allowed all sides in the war to use their coastal and air chokepoints as hubs for diplomats, prisoners, and weapons. Therefore, even if both states were not frequently and actively involved in significant air battles, their aeronautical industries were influenced by a militarised work culture and the added male-dominated military hierarchies. In addition, Portugal used its air force in the 1960s and 1970s against anti-colonial insurgencies in its colonies. It is therefore a historical, economic, and political conundrum as to how this strictly male industry developed a civil aviation sector represented primarily by (white) female workers and their bodies.

6.4.1 The Making of the Aerial Workforce

The work of Kathleen M. Barry (2007) on female flight attendants is instructive in this regard. Barry traces the history of civil aviation in terms of gender and racial segregation. Generally, and at a broader level of abstraction, workers were chosen to be light because every extra pound would cost more fuel. At the beginning of civil aviation around the 1920s – which was solely affordable for the wealthy members of society and the ruling class – white "cabin boys" were recruited to British and German airlines (ibid. 15). Because of the small cockpits, it was advantageous to have a small body size to move around during flights, to serve drinks or talk to passengers.

Civil aviation was very expensive and therefore became the transport of the wealthy sections of society. From the 1930s, airlines sought to create a luxury hotel environment to attract more passengers, recruiting male stewards, couriers and first-class hotel staff (Barry 2007: 15). Moreover, flying remained a relatively stressful form of travel. Noise, air pressure, weather turbulence, and the smell of fuel caused anxiety and ear pressure among passengers. This is why nurses were included in the workforce and entitled to act as hostesses. In

this way, companies ensured that the image of aeroplanes did not change from first class hotels to flying hospitals (ibid. 19).[73]

6.4.2 Feminine Exploitation Patterns in Aviation

In contrast to the masculinist exploitation patterns, I have described and analysed for ports, air transport is primarily characterised by a hyper-feminisation and sexualisation of its staff. In particular, check-in and cabin crew are selected exclusively on the basis of specific physical characteristics: Attractiveness, not only by meeting beauty standards, but by exceeding them through make-up, uniform design, high heels, and more, has been required of female rendered workers in airports and airplanes ever since (Barry 2007: 101). At the end of the 1960s, airlines praised themselves for choosing only "the fairest of them all" (ibid.).

Globally, female workers embodied the transformation of air travel from purely military to safe civilian transport (Barry 2007: 19; Castellitti 2019: 90). Flying with these domesticated middle class, and "light-skinned" "girls" allowed wealthy male passengers to lose their fear. Accompanied by service, expensive meals, and sleeping cabins, air travel lost its adventurous and dangerous image. At the same time, airlines sought to market the young female bodies of flying nurses to increase passenger numbers (Barry 2007: 25). While their working lives were portrayed as that of some flying hostesses or "housewives" (Koch-Baumgarten 1998: 275), the work was intense. Apart from the emotional labour involved in caring, listening, observing, and serving, flight attendants are the "authority figure" or commander in the cabin and have to enforce safety rules on board to prevent emergencies or even act in times of crisis (Barry 2007: 27).[74]

In Brazil, female cabin attendants began working on board aircraft in the early 1930s and 1940s (Portal do Aeronauta 2018). The first group of 19 flight attendants allowed to work on international flights was recruited in 1954, after the airline VARIG received permission to start flights to the United States (Castellitti 2014: 3). Flight attendants were trained to respond to emergencies.

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73 In the United States, female flight attendants were required to have a nursing certificate, while male stewards were not required to have this additional qualification (Barry 2007: 21). It was only with the labour shortage in the health sector during the Second World War that this additional requirement was dropped and women without nursing qualifications were allowed to enter the aviation labour market (ibid. 24).

74 In the well-documented history of US aviation, from the 1950s onwards, female workers were marketed to attract middle- and upper-class businessmen, who would use air travel proportionately more and more regularly than tourists. New uniforms were developed to emphasise the female body, campaigns such as "Fly Me"; "We Make You Feel Good All Over"; "Have You Ever Done It the French Way?" were launched, and a hyper-sexualisation of female flight attendants became a common feature of airlines internationally (Barry 2007: 101).

They learned about jungle survival, firefighting, first aid, and meteorology (ibid. 9). Female cabin crew, however, received additional training in bourgeois habits, language, restaurant etiquette, appropriate hairstyles, make-up, and dress. These forms of the emotional labour of care and service and the aesthetic labour of public presentation of the airline company (ibid.).

To move to a more concrete level of abstraction, my research into the history of flight attendants in Portugal and Brazil does not show an age cap, as in other countries. On the contrary, cabin crew were allowed to work until a high retirement age, around 60 or more. If not as cabin crew members, they worked as professional teachers to train the next generations of crew workers (Castellitti 2014). Nevertheless, historical images show that Brazilian and Portuguese airlines, such as VASP[75] and TAP,[76] have used hyper-sexualisation and the appearance of the flight attendant as a "perfect housewife" to advertise their product. In both states, the history of the airlines shows images of young female cabin crew being sexualised as "cover girls" in advertisements. However, airlines such as GOL have introduced an advertising image that is more gender, ethnic, and age-diverse.[77]

Today, far from being a historically limited phenomenon, the feminine exploitation patterns are still in place. In September 2021, the private Brazilian airline GOL was forced by the Ministry of Labour, with the participation of the union SNA, to pay female flight attendants an additional 220 reais (about 40 US dollars). This was demanded by the unions to cover the extra costs of make-up, waxing and hair styling, i.e., the aesthetic work required of flight attendants (Sindicato Nacional dos Aeronautas 2021). This could be seen as a progressive step, as it finally recognises the extra time and money spent on the aesthetic labour that female workers embody and have to invest in. However, this extra pay will crystallise the gendered rules in aviation. A rejection of different personal dress codes for male and female cabin crew would have improved the situation, including for non-binary workers in the sector.

Another example of the exploitation of women comes from Portugal. Between 2019 and 2020, the Portuguese flagship airline TAP expanded and sought to employ more cabin crew on long-haul flights. Five female cabin crew applied for the programme (Reis 2020). They had to take an extra course and three days off to move from short-haul to long-haul flights (ibid.). This upgrade would guarantee them a permanent contract and a pay rise. However, the com-

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75 See for instance the blog Aviação no Brasil e no Mundo (2012). VASP Saudade, https://aviacaonobrasilenomundo.blogspot.com/2012/03/vasp-saudade.html [Access: 08.12.2021].

76 See the blog of TAP Air Portugal "A Nossa História", https://www.tapairportugal.com/pt/a-nossa-historia/cronologia [Access: 08.12.2021].

77 See the blog of GOL (2008) "Our history", https://www.voegol.com.br/en/about-gol/gol-history [Access: 08.12.2021]. Women's day has been celebrated with an all-women flight crew, including pilots; the magazine of the company has carefully chosen non-sexualised covers of diverse people and situations.

pany did not select any of these women because they were pregnant or on maternity leave when they applied. All were dismissed after maternity leave from their former positions (ibid.). At the same time, a male steward, who was the partner of one of the dismissed cabin crew and the father of a new-born child, was promoted despite having less work experience than his female partner (ibid.). The barriers for women workers to enter and remain in the transport sector, particularly aviation after marriage or pregnancy were often referred to in the literature as part of the 1950s. However, this is an example of how historical phenomena persist today, and how a female worker's use of her body is not a personal choice, but is entangled in and governed by patriarchal gender rules. The choice of when and whether to have a family can be reconciled with the material sanctioning of these workers.

The enforcement of gendered aesthetic expectations and the exclusion from the sector on the grounds of age or pregnancy show that the feminine exploitation patterns work very differently from the masculinist. However, both follow the naturalisation and essentialisation of the male or female body in order to exploit them in different ways. The naturalisation of the male worker's body in the port is channelled more towards self-exploitation and securing the workforce against instability and insecurity. Female or transgender workers are harassed by established workers until they have "proven" themselves. The exploitation patterns of women in aviation are driven by the interests of the industry. It is part of a capital accumulation strategy that uses the patriarchal, heteronormative "male gaze", and forms of hyper-sexualisation to increase the number of mainly male, white, and wealthy passengers who fly regularly. Male cabin crew have been marginalised by the industry itself, rather than by the hostility of female colleagues.[78] However, more indebt research on this type of exclusion is still needed.

6.4.3 "In Nobody's World": Invisible Feminised Airport Labour

I will now move from this broader level of abstraction and the general development of work in aviation to the concrete, embodied labour relations at the

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78 According to Phil Tiemeyer (2004) the hyper-sexualisation of female workers' bodies led to the exclusion of male workers and an indirect accusation of homosexuality if they continued to work in the sector as men. However, the civil rights, feminist, and LGBTQI* movements of the 1970s led to a change in gender relations. In the aviation sector in particular, the political demands of openly gay male flight attendants partially transformed aviation into a "gay friendly" workplace. Gay cabin crew were at the forefront of demanding jobs for gay workers and showing pride in their sexual freedom. However, with the emergence of AIDS in the 1980s and the claim that "patient zero" was a flight attendant, queer liberty in aviation changed drastically. Male workers were excluded from the workplace because passengers were afraid of being infected, due to a lack of knowledge about the disease and the stigma of the "gay plague". There was also a backlash and shortage of staff as many gay male cabin crews lost their lives to the disease and suffered additional stigma.

airports, Humberto Delgado in Lisbon and Alberto Santos Dumont in Rio de Janeiro. In this way, I will reintegrate and embed my findings within the history I have accessed during my fieldwork.

Aviation work in Brazil and Portugal has changed enormously over the last fifteen years. One reason for this has been the flexibilisation of aviation and the increasing market share of low-fare airlines (LFAs). Many tasks performed by one category, such as check-in and cabin crew work, have been divided into many more occupations (B63_2 2018: item 2).

In Rio de Janeiro, since the bankruptcy or merger of the three major airlines VARIG, Panair, and VASP, which were strongholds of the trade unions and transport workers' movement, many labour laws, regulations, and agreements have had to be built from scratch (B41_2 2018: item 4; B63_1 2018: item 2). At the same time, the process of automation and the division of labour into new occupations has taken place, presenting trade union activists with the dual challenge of defending working conditions and wages in the aviation industry and negotiating new collective agreements for the new occupations (B63_1 2018: item 2).

Shifts have become irregular; workers cannot plan holidays or events with family or friends as work is sometimes rescheduled from day to day (B63_1 2018: item 2). The airport is similar to the port industry, where flexible scheduling of workers is a vital part of the sector. As one informant pointed out:

Today, we see a form of, let's say, a massive turnover. People today are no longer considered aeroviário; they no longer consider themselves as aeroviário. … Working in the airline became, let's say, a transitional opportunity to other paths. (ibid. 3; own translation [AE])

The process of increased division of labour has created a situation of "precarity for all": regardless of gender, all airport workers, with the exception of pilots, experience feminisation or "housewivisation" (Mies 1996: 359), i.e., a specific type of precarisation of their work. Airport work has been reduced to short-term work, with part-time contracts and rapid turnover of young workers. This development reinstates the age cap experienced by cabin crew in Western and Northern airlines. The work is associated with many additional skills, such as language skills, health and safety measures, and physical work, such as handling and assisting. However, airport work is presented as low-skilled, flexible, and largely invisible.

Over the last fifteen years, airport work in Lisbon has been gradually casualised. The austerity measures of 2010-2014 had another dramatic impact on organised labour at the airport (P26 2017: item 5). Mass dismissals were launched by ground handling companies such as Portway, targeting the stable working conditions and high union density in the ground handling sector (ibid. item 14). Unlike in Brazil, airport occupations are not grouped under the name *aeroviário* but under the Anglo-American term handling (P16_1 2017: item 2).

In particular, the feminised service of assistance is made invisible. Since 2008, the European Union has required all airports to provide assistance to

passengers with disabilities or reduced mobility. Since then, the private airport operator ANA, which outsources handling to two companies, Groundforce and Portway, has regulated the employment of airport assistants. These workers help passengers who regularly fly to, for example, the Portuguese African islands or Portuguese-speaking countries, in order to access better medical care (P22_2: item 1).

In 2018, all of the approximately 200 assistants had individual contracts based on the level of the minimum wage (506 euros/month). Moreover, as this type of work is relatively new, there is no legal regulation for this growing sector at the airport. The service is growing by around 30 per cent a year. The increase is due to an ageing population and low air fares (P22_1 2017: item 6). As a result, the number of mainly female assistants has also increased. However, their position at the airport is very precarious, similar to that at Santos-Dumont in Brazil. As they are employed by a handling company, the airport considers them to be handling workers. However, as they transport and look after passengers with special needs, the handling company does not consider them part of its integrated workforce and blocks them from any career opportunities. Therefore, for a decade of their existence, the assistants have not been classified as skilled workers, even though they carry out physical handling and social care work when carrying and transporting disabled passengers (ibid. item 49). Because of the precarious nature of the work, and also because the handling was considered feminised work and masculine manual labour, assistant workers were not covered by the collective agreements of handling companies or other operators. As one worker noted

We have no rights. That's it. So, we have individual labour contracts. We are not covered by the Portway or ANA company agreement. So, we are in nobody's world. … And whoever is there who enters today or whoever has been there like me for almost five years, earn the same as the day they entered. So, I have colleagues who were hired eight years ago. And they continue to earn the same, so they don't have levels or a professional category that allows them, for example, to compete for other functions within the same category. This situation blocks us. (P22_1 2017: items 3-4; own translation [AE])

The work is precarious and is made invisible by the companies and by the working arrangements. The work of the assistants is not only hidden because there are many female workers. Nevertheless, it is a reproductive task that does not directly create new value for the aviation industry. Indirectly, however, the service makes it possible to increase the number of passengers and segments traditionally excluded from flying.

Another invisible occupation is call centre work, which has increased since check-in was moved to online platforms, with considerably fewer workers in the check-in service. However, the number of call centre workers working for TAP, a company that has been outsourced twice, has increased in recent years (P32 2019: items 6-7). A large number of call centre workers shows that reproductive tasks can never be eliminated but only transferred to other spaces,

despite attempts to automate and transfer such tasks to online platforms in order to reduce labour costs. Their work is also linked to a growing number of disabled or impaired passengers who often use air travel as a means of transport. Call centre agents must be able to speak several languages, understand medical terms, and decide whether a customer is fit to fly:

… [I]f people needed a specific … type of medicine, for instance, like some medicines needed to be cool during all the all the trip and all the airplanes have like a fridge where you could … store them and people that would tell us, I have these I have this condition, I take this medicine, and we would fill in kind of a form. … It's like sometimes we would have to advise people like, let's say people would have like pacemakers and things like that, that they could fly or if they had some … specific conditions like we couldn't [let them] fly. So, … we had kind of some manuals about it, you know, like it would say like if the person has this or this that you can't let them fly. (P32 2019: items 48-49)

Call centre agents have to organise oxygen cylinders for passengers with limited lung capacity, who are more vulnerable to the lower oxygen levels in the cabin. They also rebook flights, sell tickets, and search for luggage or other lost things. All this has to be done by telephone and using about seven different types of software (ibid. item 40). Although call centre workers organise the entire reproduction of passengers and even sell the commodity of a change of location, they are poorly paid. In Portugal, full-time call centre workers receive 700 euros a month. However, most of them have only part-time contracts (ibid. item 35).

Workers in both the assistant and call centre professions require a wide range of skills: They have often studied different languages, which is necessary as they work in an internationalised hub. They know about medicines, care work, health and safety, aviation infrastructure, nutrition, weather conditions, tourism, and software. There is no extra pay for this knowledge, but in some cases, contracts mention a bonus if workers speak at least three languages (P32 2019: item 35). As with cabin crew in the early days of aviation, who had to have a nursing qualification, the different skills, and occupations of assistants and call centre workers are not recognised, even though their work would be impossible without these additional qualifications. However, as aviation companies traditionally disguise the actual skills involved in feminised work, such as caring and organising reproduction, the work is considered "low-skilled" and paid accordingly.

6.4.4 Organising Obstacles for Embodied Feminised Labour

This gendered division of labour has been an obstacle to organising because union officials do not focus on precarious and feminised sectors. An informant who supported the protests against the privatisation of TAP said:

I … learnt a lot about how they define their hierarchies, their contracts, … the difference in wages between men and women, and how this all became tiny little problems inside the strike they were making. I don't think they ever surpassed these problems. (P15_1 2017: item 26)

Gendered hierarchies and wage differences show how precarious or non-precarious work is and how much trade unions consider it to be organisable. As one airport worker pointed out:

… [I]n general unions pay little attention to more precarious people. They are more geared towards older workers … And then people … wonder why I'm giving my money to the union. So, I think it's out of precariousness and then that the unions are not as present and as active for those people as they should be. (P22_1 2017: item 38; own translation [AE])

Precarious work is often linked to gendered work. Women struggle to be recognised by trade union structures because their contribution to the union in terms of membership fees is not as high as in less casualised sectors.

At both Santos Dumont and Humberto Delgado airports, union density is relatively low, although for different reasons: In Brazil, the strongholds of aerial labour have been dismantled and new occupations have emerged. Airport work has been casualised, followed by traditionally feminised work characteristics such as part-time work and a high turnover rate. This development is a structural factor linked to the transformation of the industry, which has weakened organised labour at Santos Dumont. In Lisbon, many airport workers, such as ground handling, mechanics, and security services, were still relatively well organised and had permanent contracts, but this has changed due to austerity measures and more flexible labour laws. A similar process of disorganisation developed following the economic crisis of the Portuguese state as a whole, not due to the turmoil in the aviation industry as in Brazil (P26 2017: items 22-23). At the same time, newly emerging social assistance and call centre occupations had to deal with precarious contracts. This resulted in low wages, invisibility, and marginalisation, partly as women's work, caring for and transporting passengers. However, these new occupations generally created a precarious workforce that was not recognised by trade union structures (P26 2017: item 24). In addition, the unions in the airport sector do not have strike funds because they are largely linked to the Communist Trade Union Confederation CGTP-IN, which, according to one interviewee, considers strike funds to undermine the radial consciousness of the workers (P16_1 2017: item 75). The airport worker directly links this lack of funding to the low participation of women workers in strike activities and plenaries:

Workers with families have no time for political activism. Workers have already asked for plenaries just for women in my company because they cannot attend a meeting for three or four hours as they have to pick up their children. Sometimes, the few that go are worth it because of the social pressure of being a woman. Sometimes, the few who go have to leave in the middle of the plenary session to pick up their children. Imagine going on strike. Imagine in their house the man who does not work at the airport will go on strike for what? Less salary? (P16_1 2017: item 76; own translation [AE]).

The split over whether to have a strike fund is linked to the different syndicalist traditions in Portugal. Unlike the CGTP-IN unions, the independent dockers' union has a strike fund. But an already precarious and feminised sector without a strike fund, such as the airport, is harder to organise than a predominantly male sector. Workers in the ports outsource childcare to their partners who support their struggles.

Gender segregation is still an obstacle to organising joint struggles. Women workers in particular are exposed to precarious work. They face either a weakened trade union structure, as in Brazil, or an indifferent union without strike funds and family support, as in Portugal. In general, the clean division of labour has created new occupations and a workforce that, despite many obstacles, has been gradually reorganising since 2018 and negotiating working conditions, challenging unions and airlines to integrate them into "their world".

Overcoming these obstacles, assistants went on strike several times in 2018, 2019, 2020, and 2022. Portugal's largest aviation union, SITAVA, and the ground handling company Portway reached an agreement that recognises and describes the work of airport assistants, making it more visible in collective agreements.

6.4.5 Aviation Labour and the ILO

In section 6.1.3 on ILO protection of workers in the port sector, I pointed out that ILO conventions and regulations have a gender bias that has not been reversed to date. Based on ILO Convention C127 and Recommendation R128 of 1967, cargo handling and lifting are regulated along age and, more importantly, gender lines, excluding female workers from certain tasks and occupations (ILO 1967b). In contrast, regulation would need to protect all workers and their working bodies from physical harm through training, teamwork, and specific techniques. Above, I pointed to the contradictory implementation of such a regulation for specific sectors and occupations, while other already female-dominated jobs were not included. I pointed out that female-dominated, low-paid, and under-regulated service sectors include lifting heavy loads and people, night shifts, and working with hazardous materials and environments. This is particularly evident in the aviation sector. As Ellen Rosskam (2018: 23) points out:

Most jobs performed by women are excluded from occupational health research. Airport check-in workers are mostly, but not exclusively, women. The "feminized" image of check-in work combined with the perception of check-in work as "safe" and "clean" help explain why check-in workers have not been included previously in work-related health or social and economic security studies.

Apart from the gendering of occupations, which gives feminised work an image of being "easy", "clean" and "protected" or "safe", it is also the mono-

gendered health and safety bias that obscures the different techniques used by male and female workers when lifting. However, different handling techniques can lead to different types of injuries, which are not part of occupational health and safety research with female workers, because lifting injuries are exclusively associated with male-dominated work (ibid. 50).

In addition, the transport industry generally breaks the boundaries of a "normal" working day, with the port, airport, flight, and ship operating day and night (Labour Research Department 1946: 7-8). Female cabin crew and airport workers, therefore, had to break special rules to enter the sector, long before ILO and ITF trade unionists challenged the ban on night work for women (Politakis 2001: 406).

However, the hyper-sexualisation of cabin crew and airport workers has additionally led to another occupational issue, sexual harassment (Hanlon 2017: 191). Various national studies suggest that around two-thirds of all cabin crew experience some form of sexual harassment, with around 25-30 per cent experiencing physical forms such as inappropriate touching (Seligson 2019: 23). In addition, due to the vertically segregated nature of the workforce, female cabin crew also experience harassment from pilots or colleagues, although to a lesser extent than from passengers (Hanlon 2017: 190). Not only do the figures vary from country to country. A Portuguese study of cabin crew workers by Raquel Varela et al. (2019: 133) shows that forms of bullying and harassment also vary between airlines. This suggests that companies have a clear responsibility in how they organise their working environments and whether or not they use sexualised advertising.

In 2019, during the 108th session of the International Labour Conference, Convention 190 against violence and harassment was implemented by the ILO. According to Seligson (2019: 24), "for the first time, violence and harassment in the world of work are covered by a specific new ILO international labour standard". The Convention recognises:

… [G]ender-based violence and harassment disproportionately affects women and girls, and recognizing that an inclusive, integrated and gender-responsive approach, which tackles underlying causes and risk factors, including gender stereotypes, multiple and intersecting forms of discrimination, and unequal gender-based power relations, is essential to ending violence and harassment in the world of work (ILO 2019).

This convention is essential to reduce the impact of feminine exploitation patterns. However, as I have shown above, "gender stereotypes", e.g., the naturalisation of male or female physical characteristics, are still part of the ILO Conventions and need to be reviewed in relation to C190 in order to combat gender discrimination and (self-)exploitation.

6.5 Racialised Exploitation Patterns in Aviation: "White space" Up in the Air

Like the maritime sector, the air transport sector is also characterised by specific racialised exploitation patterns. In Brazil, as the most expensive form of passenger transport, civil aviation, expanded, became cheaper, and an institutionalised means of capital accumulation, airlines competed with the railways to attract wealthy passengers. The development was similar to that in the U.S. (Barry 2007: 15): Male and sometimes female Afro-Brazilian porters worked on trains as servants and maids. Female Afro-Brazilians were employed to accompany young white middle- and upper-class women.

As Cowen (2019: 5) points out for Canada, the black workers who would become porters were the children and grandchildren of former construction workers or enslaved people of the railway companies. They lived alongside the railways in small towns and slums around the fixed capital and dead labour (in both senses of the word) that they had created. This labour force was poor and underpaid and therefore forced to live on tips, which developed an additional layer of dependency on the goodwill and wealth of white passengers (Barry 2007: 16-17).

To differentiate air travel from rail travel, airline management sought to create an exclusive community or "white space" where "racially subordinated groups" were absent (Barry 2007: 11-12; McKay 2021: 6). The white uniforms emphasised the plane as a white space, expressing both professionalism and white exclusivity.

The "white space" in the air was also implemented in Brazil's "racial democracy". The company VARIG recruited flight attendants exclusively from the state of Rio Grande do Sul in the far south of Brazil, known for a significant European and German diaspora with light skin and blonde hair (Castellitti 2019: 93). The predominantly black construction and railway workers were instead concentrated on the east coast and north of the state. At the same time, geographical location meant an embodied racialisation of transport labour. "German discipline" was equated with professionalism and technological perfection (ibid. 92). This racialised exclusivity allowed the creation of a white Brazilian air transport.

Moreover, as mentioned in section 4.2, VARIG, which was partly of German origin, became entangled in the ongoing neocolonial conflict between US and German imperialist forces. In the 1940s, VARIG stopped buying aircraft from Germany and contracted with the US (Giannotti 1995: 10-11). However, the descent of the German flight attendants can be seen as the final statement in the conflict.

According to Castellitti (2019: 96), the advertisement was not only characterised by an over-sexualisation of cabin crew, but also by the absence of black people:

> Whiteness is thus invariably triggered by its association with class, elegance and excellence ("international standard"), and race is avoided, even though it is imbued in the celebration of the "joy" and "easiness" of the Brazilian "way".

In Brazil, most of the first black cabin crew entered the profession in the early 1980s, after applying for the job several times and at a time when many airlines were in financial turmoil due to increasing labour disputes and were probably looking for cheaper labour.

As aviation played a crucial role in the anti-colonial wars of the 1960s, few women and even fewer black and coloured people were employed in the sector in Portugal. In general, studies of racialised labour in Portugal are still comparatively rare. The Portuguese state and civil society have only recently acknowledged the racialised colonial history (Correira 2021). The Portuguese national airline, TAP, still celebrates on its website that it was "born in a country of discoverers".[79] Such a statement indicates a lack of reflection on the colonial past and the past of the state. The term "exploration" is a euphemism for the exploitative and extractivist nature of the former Portuguese empire.

6.5.1 FOC in Aviation

Moving on from this broader historical level of abstraction to the present, I examine processes similar to those in maritime transport. Looking at the recent European crisis, we can analyse a form of racialisation of aviation labour from the European periphery, with parallels to the FOC system in maritime transport (Harvey/Turnbull 2015: 308). Like the flexibilisation of maritime labour, low-fare airlines (LFAs) have sought to "open the skies" to lower labour costs by accessing workers from low-wage regions. Originally developed by the US company Southwest Airlines after the flexibilisation of air transport in 1970, the business model of LFAs includes the idea of a "bus with wings" (ibid. 311-312): Only one class, self-check-in, low service, e.g., no free food or drinks, use of secondary airports with less infrastructural connection for passengers, therefore, with low fees for the companies and faster turnaround times due to less airport congestion (ibid. 311-312). Regarding cabin crew and airport staff, LFAs like Ryanair rely on outsourced companies for every aspect of the industry.

> Check-in, ground handling, fuelling, maintenance, and so forth, are subcontracted to independent third parties, which is a particularly effective way for the employer to cut costs,

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79   "Nascemos num país do exploradores … estivemos presentes em grandes momentos da história." (Blog TAP Portugal – source: see footnote 106).

shed responsibility, increase flexibility, and disempower the workforce. (Harvey/Turnbull 2015: 312)

Ryanair employs very young workers from the European periphery for its cabin crew. This practice became even more possible after the European crisis of 2009, when governments in countries such as Portugal opted for severe cuts in the welfare state and labour regulation (Boewe et al. 2021: 13). As a result, most of Ryanair's workers come from either Ireland, Spain, Greece or Portugal, the so-called "PIGS" countries that have been portrayed as lazy and profligate by core EU states such as Germany (UK30 2018: 47). LFAs exploit Europe's income disparities between states and the precariousness of workers in Europe's periphery. For most young Portuguese workers, a job at Ryanair is promising, as they might not find comparable stable contracts or wages in other sectors (ibid.). However, working conditions have forced many workers to leave the company after a short time. As one former Ryanair cabin crew member pointed out:

You spend 25 minutes in an airport. You look at the timeline. You get passengers off, passengers on again. And that's it, and you do that for twelve hours, 13, 14 hours. (UK 30 2018: item 47)

In addition, Ryanair cabin crew have to buy their own uniforms, bring their own water and food on board, or pay for it at the regular Ryanair prices, and are also charged for the hotels where they have to stay overnight (P12 2017: 14; Boewe et al. 2021: 15). The accommodation problem is not limited to hotel costs. At Ryanair, cabin crew are circular migrants with constantly changing assignments (Butollo 2021: 528). Female cabin crew are forced to find accommodation in cities where prices have risen dramatically in recent years, with little opportunity to plan their own lives or establish relationships. One interviewee in Jörn Boewe et al.'s study (2021: 16) points out that shifts are so inflexible that it is impossible to plan productive and reproductive work adequately:

… [W]ith the schedules, it's like I still have to think extra about how I'm going to do it with the baby, … they change the schedules without telling you. "You have to come; we need you to set it up!"

Yet even at Ryanair, pilots are not as disadvantaged as cabin crew. Cabin crew and airport workers are dislocated and have to get used to new areas and houses and constantly reorganise their reproductive sphere. The predominantly white and male pilots, recruited mainly from the wealthier centre of Europe, can choose their bases and stay where they want (Boewe et al. 2021: 14).

In LFAs, vertical racialised exploitation patterns emerge, with white, central European, more settled pilots at the top (still paid less than in other airlines) and a flexible, ever-changing, young, and predominantly female workforce from the European South. It is important to recognise that the racialisation of flight crews develops out of a strategy of capital accumulation that exploits the

uneven economic and social space in which workers and their bodies are embedded in order to minimise labour costs (Butollo 2021).

The FOC/LFA systems are tools for the racialisation of workers across national borders and the exploitation of workers from low-wage regions. As noted above, dockers are concerned that greater labour flexibility will open ports to a racialised circular migration of workers. By comparison, airport workers already experience high levels of outsourcing and racialisation. Different temporary employment agencies respond to the demands of LFA, which pressure them to undercut the wages of their many competitors (P26 2017: item 2).

6.5.2 Racialised Cargo Handling

In Brazil, the "FOCisation" of the airlines has led to the above-mentioned destruction of the three major airlines and the strongholds of the Brazilian air transport workers' movement. This process has meant that the unions have had to start from scratch, with a new level of division of labour and casualisation, as discussed in the section on gender segregation.

There is racialised segregation in airport work with passengers and cargo. According to an SNA trade unionist, air traffic has increased massively in the last decade, despite the Brazilian economic crisis in the mid-2010s. Work in this sector is even more precarious than working with passengers at the airport. I will focus on (fatal) accidents in the next chapter, but according to the interviewee, the industrial centre of Brazil, in the state of São Paulo, has several airports that mainly serve as cargo hubs. On the one hand, chemical and industrial products are transported; on the other, the transport of agricultural products such as soya by air has increased enormously. Black workers are particularly vulnerable in this sector. Despite the massive increase in freight, there has been no exponential growth in the number of workers, but an increase in overtime (B63_2 2018: item 35).

This means that racialised and predominantly male workers in particular have to do more work in less time and are exposed to more accidents.

6.5.3 The Exclusive Struggle at the "White Space" in Brazil

In August 2017, Brazilian aeronauts (pilots, cabin crew, and aircraft mechanics) achieved a fundamental labour reform for their own category, as discussed in more detail in section 9.4.7. It addressed the precariousness of their work and the dangers of metabolic rift, again discussed in detail in section 7.3. The Temer government introduced a new labour law for aeronauts in the same year that changed the entire labour code for all workers in Brazil, including airport workers. As we will see below, aviation needs safety regulations for

workers on all sides, as all steps from the airport to the cockpit are interconnected and interdependent. However, racialised segregation plays a role in separating the predominantly white cockpits from the predominantly black and brown ground handling services. While airport workers in handling, service, and maintenance went on a general strike in April 2017 and other smaller events to challenge Michel Temer's labour reform, the pilots remained silent. They continued to fly when the runways blocked by the protests were cleared by the police and security services.

Given this example of division of labour, racialised segregation and racialised exploitation patterns should not only focus on marginalised and racialised workers. It can also be used to analyse those groups who, given their structural influence in the sector and, as will be shown, in the Brazilian state, could have played a role in improving working conditions for all workers, but instead chose to concentrate on winning their struggle by trading their actual structural labour power. In this way, logistical power remains exclusive and is divided by racialised segregation.

6.5.4 Portugal's Aeronauts Started a Wave: European Strikes at Ryanair

In the case of Portugal, racial segregation had a very different effect from that in the case of Brazil. As explained above, Brazil is large and very dependent on air transport, which gives the aeronauts a specific logistical power that, unfortunately, they only used for themselves in the period between 2017 and 2019. In contrast to Brazil, Portuguese aeronauts had more structural problems to fight precarious working conditions independently. The country is small, and because of the European Open Skies Agreement of 1993, companies like Ryanair can buy labour from any country to break the strike (Mendonça 2020: 439). As a result, Portuguese aeronauts formed transnational solidarity networks. The aviation union CNPVAC was not affiliated with the ITF or the ETF. However, it joined the struggle when Ryanair pilots went on strike in December 2017 (Spiegelaere 2020: 230). This encouraged them to launch a national strike of 300 Ryanair cabin crew workers at Easter 2018 (Mendonça 2020: 439). As Ryanair employed workers from other countries, the strike did not affect flight cancellations and failed. Nevertheless, the Portuguese cabin crew were the first in Europe to strike against the low-cost carrier.

As a result, CNPVAC approached the ITF and ETF for a joint European strike to win union recognition. They were the key players in initiating further Europe-wide strikes against the airline. In July 2018, eleven unions joined the Portuguese call for a transnational strike against Ryanair's working conditions, and another strike was launched in September 2018. By the end of 2018, Ryanair had to make concessions, accepting unions in Portugal, Belgium and other

states and signing national collective agreements (Boewe et al. 2021: 22-24; 35). The Portuguese trade union SNPVAC saw the importance of challenging Ryanair to improve working conditions for Ryanair workers in order to prevent a race to the bottom for the national airline TAP, as will be discussed in more detail in section 9.5. Pedro Mendonça (2020: 441) notes that the strike broke down national and professional boundaries between workers. In this way, it has parallels with the "transversal" Reclaim Lashing campaign described in section 6.2.4.

6.6 Concluding Remarks on Segregation in Aviation

Over the past fifteen years, the aviation sector has seen a significant decline in working conditions and wages. At the same time, the industry has experienced massive growth in passenger and freight traffic. This has been made possible by the restructuring of the sector as a result of Open Skies agreements and LFA rules. These have impacted workers and their bodies through industrial relations and divisions. While many services, such as assisting passengers with special needs, selling tickets, finding luggage, and more, have become invisible and precarious, other occupations, such as check-in staff and social assistants, have suffered from overtime. These are mainly "feminised" services such as care, social work, or cleaning. The opening of the European aviation labour market and the impact of the economic crisis have allowed airlines to copy the racialised pattern of shipping companies. They now buy labour power from peripheral European countries, which have introduced wage increases and casualisation of their active workforce. This process has created a geo-graphical and gendered "colour bar" between the cabins and the airports, espe-cially in Brazil. In Europe, Central European male workers do better paid work in the cockpit, but still went on strike against Ryanair, which broke the dam for cabin crew workers to do the same and connect internationally. Portuguese and other southern European and predominantly female workers embody the industry's low-paid and flexible jobs. Yet they were able to win concessions at the most precarious LFA company.

6.7 Conclusion: Embodied Segregation and Exploitation at Chokepoints

This chapter has attempted to address the sub-questions of why and how the labour division at chokepoints is gendered and racialised, and how this affects

the exploitation of workers, their bodies, and their collective struggle. In terms of gendered exploitation patterns at chokepoints, airports, and ports, I argue that the specific history of the industry has required an aggressive implementation of gender roles and norms inscribed on workers' bodies. As patriarchy is a solid system of oppression intertwined with capitalism, its effects have been visible in the transport workers' movement in Brazil and Portugal.

I observed a solid but porous exploitation pattern of "protest masculinity" in the ports. I argued that these are expressions of lost battles in a dangerous workplace characterised by strong patriarchal family ties. The masculinist exploitation patterns tend to prevent workers from addressing problems. Any sign of physical fatigue, expression of homosexual attraction, or gender insecurity is threatened to be exposed as weakening the male body and therefore rendered "un-masculine".

The airport sector exposes precarious feminised workers and their bodies to a patriarchal capitalist perception of care work. They are traditionally obscured and excluded from "all worlds", forcing them to make themselves visible through strikes and blockades. Air and sea transport are very specific in this regard. For example, not all areas of the transport sector have historically required and built strong gendered exploitation patterns. I would argue that, for example, work in the contemporary warehousing sector is characterised by different exploitation patterns, linked to an eagerness and embodied strength that normalises a particular behaviour and type of self-exploitation, regardless of gender or race. However, different exploitation patterns target workers and their bodies in different ways: The need to skip toilet breaks can lead to bladder infections for female workers, while men sometimes use their physical capabilities to urinate in bottles. The pressures at work will affect workers who have additional unpaid care and domestic work at home differently than workers who do not have such additional responsibilities, or even partners or parents who support them.

Meanwhile, racialised exploitation patterns have a long history in both spaces, either exploiting manual labour in the port sector or creating a "white space" as in aviation.

However, as I argue in chapter five, there are historical and biographical aspects that have an impact on the working body. In aviation in particular, the turnover of workers as cabin crew on low-cost airlines or at the airport limits their time in the industry. It may be only part of their working biography. At the same time, the sector is historically characterised by feminine exploitation patterns through over-sexualisation and devaluation of skills. Such aspects are necessary for several occupations in the aviation industry, forcing workers to have short employment contracts and, on average, a short biographical connection to the sector, for example, in the port and maritime sector. Conversely, in the port industry, the biographical impact on embodied work is characterised by strong family ties and long periods of employment in ports. These are a

historical legacy of the sector and how it developed its workforce in gangs, ethnic, and family relationships, and a division of labour between young seafarers and older, less mobile dockers.

There are several differences between Brazil and Portugal in terms of the geographical and spatial aspects of the creation of the working bodies at the chokepoints. These are related to the size and location of each state. The continental state of Brazil relies on a large aerial labour force to overcome its neocolonial legacy of lack of road and rail transport, as well as significant distances and topographical peculiarities. Because of its large agricultural export economy, with large fields in the centre and north of the country, Brazil is much more dependent on cargo aviation than Portugal. In Brazil, the sector creates a racialised workforce of black handling workers who enable the relocation of industrial and agricultural products. By comparison, the Portuguese state is much more dependent on passenger transport because it has a large Portuguese diaspora and is located on the edge of the European continent, with long distances to its main (former colonial) trading partners in China, Angola, and Brazil. Because of its peripheral position in the European Union, it also has a low-cost labour force that has been racialised over the years, at least in the way that companies like Ryanair exploit it for their race-to-the-bottom business model.

What is missing from this chapter is an explicit discussion of the other power dynamics of white supremacy and patriarchy, which I leave out here to sharpen the focus on capitalist exploitation. However, as has become clear, I cannot fully explain specific dynamics that influenced the division labour in transport. For example, why did women in Portugal have a more liberal inheritance law than elsewhere? Why is blackness historically equated with manual labour? These are essential aspects that influence the way in which work at chokepoints has developed historically. I highlight these unresolved questions to underline my approach to chokepoint labour from the side of capitalism as a social whole. The dynamics and findings of this work are limited to this perspective and therefore open to improvement.

7. Precarious Embodied Exploitation

… They died in their hundreds with no sign to mark where,
Save the brass in the pocket of the entrepreneur
By landslide and rock blast, they got buried so deep
That in death, if not life, they'll have peace while they sleep

Their mark on this land is still seen and still laid
The way for a commerce where vast fortunes were made
The supply of an empire where the sun never set
Which is now deep in darkness, but the railway's there yet.[80]

Throughout the long durée of capitalism, transport, and construction workers have lost their lives producing, maintaining, and moving commodities and variable capital. While fixed and variable capital have been able to change location, precarious working conditions have dominated their workplaces. The remnants of fixed capital are still visible in railways, giant ships (sometimes already in museums), aeroplanes, and lorries. Yet the names and numbers of the workers who died shovelling the massive canals, building the jetties, and moving the ships and goods in the ports have disappeared from public knowledge. Instead, workers at sea and in the ports were portrayed as wild, drunk, noisy, promiscuous, and violent, people who needed to be tamed like "wild animals". At the same time, the actual violence they suffered at work was made invisible or justified by such characterisations.

This chapter exposes this violence. It discusses the reasons for the struggle that trade unionists, workers, and social movement activists have raised around chokepoints as workplaces, using the concept of the metabolic rift. The previous chapter explored the history of gendered and racialised segregation and the impact of specific exploitation patterns at ports and airports. The chapter concluded that the massive casualisation of labour over the last 15 years has had a major impact on workers and their ability to organise. Therefore, this chapter goes deeper into the workers' Social Reproduction Metabolism and the threat of a metabolic rift, examining it through the lens of precarious exploitation patterns. First, I will examine the metabolic rift between productive and reproductive time and space as a tug of war. Because the capitalist mode of production needs to channel labour time into its enterprises, there is always a conflict over the extent to which the ruling class or capitalists can consume labour power. Precarious exploitation patterns are characterised by the constant threat of breaking this metabolism in which the worker produces and reproduces.

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80 The quote is from the song "Navigator" written by Phil Gaston from the UK/Irish band The Pogues. It was recorded in 1985 as a part of their second album "Rum, sodomy, and the lash". The album title stems from a famous quote of Winston Churchill, who is supposed to have said: "Don't talk to me about naval tradition. It's nothing but rum, sodomy, and the lash."

Physical and fatal injuries, trauma, and depression, chronic fatigue, and absenteeism characterise the metabolic rift at the chokepoints. I will follow a historical analysis of the two transport sectors. From this broader historical comparison, I will zoom in and add my empirical findings for the ports of Lisbon and Santos and the airports of Santos Dumont and Humberto Delgado and how workers experience precarious working and organising conditions.

Since this chapter is the second empirical level that belongs to the analytical focus of Social Reproduction Metabolism and embedded labour, I will sketch the embedded and relational comparison between 1750 and 2020, as in the previous chapter. When discussing precarious labour conditions, it becomes clear that some of the aspects mentioned here are solid and survive in the pores of capitalist labour relations. Since the onset of neoliberalism and its authoritarian deepening during the last economic crisis, precarious working conditions in transport have changed and, in some ways, resemble working conditions on the eve of the transformation of global transport networks and ports from colonial to industrial hubs. By linking the metabolic rift to the social reproduction of the worker, I aim to enrich the understanding of precarious labour in the transport sector, how it is experienced physically and mentally, and how workers can organise despite its (deadly) challenges.

7.1 Health and Safety Conflicts at Chokepoints from a Historical Perspective

Historically, precarious jobs, in terms of low wages and uncertain contract terms, lead to a much higher risk of metabolic rift than jobs where workers are comparatively well paid and have negotiated contracts (see also Becker et al. 2013). However, well-paid workers can also suffer from precariousness in other ways: Precarious jobs with a severe lack of maintenance of infrastructure and tools, overtime, and lack of training. The health and safety of workers and the sustainability of their working bodies are not a priority for the capitalist mode of production, unless there is a labour shortage associated with high turnover, early disability, or death (Brinkmann 2011: 145). As David Harvey (1998: 406) points out: "Healthy bodies may be needed, but deformities, pathologies, sickness are often produced".

In the following subsection, I take a few examples from the history of metabolic rifts in the transport industry, focusing on the maritime/port and aviation/airport industries. I embed these with current, more global observations before moving on to the more concrete level of abstraction of my empirical fieldwork findings on embodied precarious exploitation.

7.1.1 Health and Safety in the Maritime and Port Sector

a) At the sea

In general, ships, one of the critical factors in global transport, are spaces where production and reproduction merge. As these spaces are disconnected from land, they need to maintain a workforce, at least from departure to arrival, to navigate and operate the ship. These specific characteristics of maritime transport exposed workers in a particular way to the economic and political crises of the industry. Working conditions deteriorated when there was a large supply of labour (Newbold 1918: 12).

Sailors suffered cramped, claustrophobic quarters … disease, disabling accidents, shipwreck, and premature death. They faced discipline from their officers that was brutal and often murderous. And they got but small return for their death-defying labors, for peacetime wages were low and fraud in payment was frequent. (Linebaugh/Rediker 2007: 160)

By the end of the 19th century, however, the labour force needed to work the global shipping routes was large enough to allow for a massive, calculated loss of seafarers who died as a result of deliberate overloading and manipulation of ships. Workers called these ships "coffin ships" because they were doomed to sink. Merchant shipping companies used the practice of overloading during overcapacity crises to destroy goods, while shipowners and merchants received insurance payments. In some cases, overloading was not intended to sink the ship, but was an attempt to speed up turnaround time by carrying a greater volume of goods. As Martin Eden (1913-1914: 3) reported from Britain:

In 1890, due almost entirely to the work of Samuel Plimsoll, a Compulsory Load Line -Dill was passed in the House of Commons. At that time there was a type of vessel known as the coffin ship, which Thousands of them never returned. The deaths of sailors at sea amounted to more than 1 in 6o as against 1 in 135 miners killed underground. It was this evil that Plimsoll fought so heroically to end. He asked that every shipowner should be compelled to mark on his ship a disc with a horizontal line through its and only down to which, it could be loaded, so that it had a sufficient space of freeboard to ensure safety. After 20 years of … effort, Plimsoll, by his earnestness and persistence, had coerced the House of Commons into passing his bill, with the result that the loss of life at sea fell from 3,500 in 1885 to 1,600 per annum, whilst at the same time the number of seamen increased.

The deliberate acceptance of dead labour has always been a feature of the transport industry under capitalism. Today there may not be coffin ships, but there are "ghost ships" or "floating prisons". Just as at the end of the 19th century, owners, traders, or manufacturers overload ships, which are at risk of sinking in the event of large waves or storms. They also abandon ships for lack of insurance, investment, and other financial incentives.

In September 2016, various international newspapers reported how dozens of container ships of the South Korean shipping company "Hanjin" were stranded at several US and European ports, carrying goods worth a total of $14 billion (Silver 2016). Until then, Hanjin had been one of the world's top seven

shipping companies, which had been hit by the aftermath of the 2007/08 global economic crisis. Faced with stagnating profitability in the fiercely competitive global shipping market, Hanjin went bankrupt, unable to pay for tugboats, drainage, and warehousing. At the same time, Hanjin's management feared that goods would be confiscated to cover the remaining debts of the sinking shipping giant. Thousands of goods were stranded on ships and could not be transported to their destinations. Concerns were raised that the prices of these goods, such as computers, shoes, and clothes, could rise (Murray 2016). However, it was not just the goods that were stranded, but also the hundreds of workers who had to stay on the ships, facing food and water shortages, and an uncertain future.

The worst consequence of such abandonment was the neglect of a ship in the port of Beirut in 2013, after it had loaded 2,750 kilograms of aluminium nitrate. Only after months of negotiations was the crew allowed to disembark and obtain visas to return home. However, the original customer left the explosive aluminium nitrate in a neglected warehouse near the port. When a fire broke out nearby in 2020, the material detonated, causing the deaths of more than 150 people and the destruction of the port and parts of downtown Beirut.[81] Dockers, in particular, lost their lives as a result of the unregistered, neglected cargo whose lost voyage a few years earlier had trapped seafarers in the floating prison of a ship.

Another example of the precariousness of maritime transport is the recent Covid-19 pandemic period mentioned in section 6.2.4. A severe crew turnover crisis developed, with up to 400,000 seafarers worldwide being kept on board for much longer than contracted. Companies and shipowners feared that, because of the closed borders, a renewal of the workforce would not take place quickly enough. The involuntary stay of seafarers on board ships shows that to this day the boundaries between free and forced labour are very porous and are pushed by the industry to the extent of a metabolic rift in the Social Reproduction Metabolism of the worker. While wage labour pays the wages necessary for the reproduction of the working body, forced labour undermines the need for reproduction from the outset. In the case of the shipping industry, the forced prolongation of stays on ships blurs the lines between the two definitions of wage labour and forced labour.

As an informant from the ITF stated for today's maritime working conditions:

They have an employment contract period of perhaps, say, between six and nine months, and they keep them on board for a year or fourteen months, and that reduces the employment costs. So, people actually become conditioned on board of those vessels to suffer from those conditions to fatigue, exhaustion, depression and another kind of sort of mental disorders.

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81 Khalili, Laleh (2020a): Behind the Beirut explosion lies the lawless world of international shipping. The Guardian, https://www.theguardian.com/commentisfree/2020/aug/08/beirut-explosion-lawless-world-international-shipping- [Access: 01.02.2021].

Because they are on board of ships for too long. Then, they start making mistakes. (UK29 2018: item 19)

Not only seafarers, but also dockers can be affected by these "mistakes" resulting from a high labour density in a very competitive industry, which the ITF has challenged in the "Reclaim Lashing" campaign mentioned above. When unlashed containers fall in ports or unsecured docked ships move, dockers and seafarers are exposed to deadly risks, regardless of their industrial relations status.

b) At the port

Historically and globally, port labour has been characterised by precarious exploitation patterns. Around the end of the 19th century, dock work was highly insecure in all parts of the world. The process of gaining access to work, "shaping up", as it was called in parts of the United States, was violent. As the British trade unionist Ben Tillet (1910: 11-12) wrote in his pamphlet on the Dockers' Union and the Strike of 1889 in London:

At "The Cage", so termed because of the stout iron bars made to protect the "caller on", men ravening for food fought like madmen for the ticket, a veritable talisman of life. … [H]ungry wolves to delight in the exhibition of the savage struggle for existence, with the beasts tearing each other to pieces, so these creatures would delight in the spectacle, which, while it imbruted the victims of such a tragedy, impeached and cursed society. Coats, flesh, and even ears were torn off each other; men were crushed to death in the struggle, helpless if fallen. The strong literally threw themselves over the heads of their fellows and battled with kick and curse through the kicking, punching, cursing- crowds to the rails of the cage, which held them like rats—mad, human rats who saw food in the ticket. … Men would risk life for the boss who carried a ticket of employment; no abasement was too abject, and so the petty tyrants flourished on a system promoting the starvation and death …

This violent system of daily selection of new dockers was similar worldwide. It may be another factor in why masculinist exploitation patterns have prevailed in many ports around the world. Exercising physical strength in the selection process allowed a greater chance of gaining access to the job and survival. The quote illustrates how masculinist and precarious exploitation patterns are intertwined in ports. In Brazil, dockers in Santos reported that until the early 1990s, there were also callers to organise the shape-up process, who took turns with the dockers. At a certain point, it was up to each of them to decide who would have the right to work the next shift and who would go home with empty pockets. A family member of a former dockworker from Santos (B46 2018: item 8; own translation [AE]) reports about the callers, or "masters":

The work of the master generally lasted less than a month. Sometimes two weeks. He [the father of the family] came to be the master for 15 days, and during these 15 days, he had to organise the workers' groups [gangs]. And this was very complicated because he had to choose the cards of those workers who would be paid for doing the service. He reclaimed that it was very hard because he had to step onto the platform; he needed 15 workers. But

there were so many more there. They were all raising their cards and screamed, "Ah, take me, take me!" … He had to take 15 no more. He wouldn't take any more. He said he felt the life of the others going home without work, you know. He knew he would be on the pavement at another time. He would be the one who would be lifting the card there, right.

While shape-up was traditional in ports in the Americas, the process was different in European ports. In Lisbon, shape-up was organised in the so-called counting houses from around the 1920s onwards. However, it was often the workers themselves who selected other workers for the next ship or the next few shifts.

In a video from Rádio e Televisão de Portugal (1970), workers affirm that: "… first they count the friends, the acquaintances, the boys from the land, then the others. This has always been so; the criteria are like this; I have always known like this… (Queiroz/Lara 2019: 51; own translation [AE]).

In the past, radio broadcasts were used to announce the arrival of a new ship. Workers would gather in pubs or the counting house to wait for the announcement and then go to the port to try to get a contract to work on the incoming ship. Today, the platform industry and the internet provide casual dockworkers with information about incoming ships, which still plays a role in ports such as Setúbal in southern Portugal.

As we have seen above, the selection or shape-up was a violent process, not only because it often led to fights, but also because workers who were denied a job ticket went home hungry or had to turn to even more precarious and possibly dangerous jobs to feed their families. The violent selection process took place even before the shift began. The work itself was no less dangerous.

Today, in front of the port of Santos, there is a huge statue representing the torso of a worker carrying a large sack of coffee on his naked body (see book cover). To this day, sugar and coffee sacks are physically transported from container to container, container to truck, etc.

In Portugal, too, despite the mechanisation of certain tasks and the introduction of containers, there were still some manual and physically demanding tasks that workers had to perform with their bodies. Queiroz and Lara (2019: 66) analysed the role of the "gancho", the metal hook, as an extended physical part of the hand. Dockworkers in Lisbon, as well as in northern and other southern European ports, used the metal hook to handle sacks moved above their heads by cranes. "It facilitated the movement of the load, as it was designed to improve the 'manual grip', acting as an extension of the hands and arms." (ibid. 66; own translation [AE]) Workers often made the hook themselves to adjust the grip for their hands. However, constant use of the hook led to deformities of the fingers and hands, heavy strain on the upper and lower back, and various spinal problems (ibid.).

The work has changed, parts have been mechanised or automated, and the hook has vanished as the main dockworkers' tool (B43 2018: ibid. 3). However, there are still working processes that engrave themselves into the very labour-

ing body of the workers. Upper and lower back pain, chronic fatigue, and other physical and mental aspects are still part of today's port labour. The hook is still the symbol in the logos of dockworkers' trade unions. It is related to the "lawlessness" of pirates as well as how dock work violently has inscribed itself into the workers' bodies.

7.1.2 Health and Safety in the Aviation and Airport Industry

a) In the air

As noted above, aviation is the transport sector with the highest proportion of female workers in the world. Particularly in the early days of aviation, when aircraft maintenance and airport services were very rudimentary, cabin crews cleaned the aircraft, including the toilets, refuelled it, and rolled it "into hangars" (Barry 2007: 29). This workload is similar to the early days of shipping, when seafarers also loaded and unloaded cargo before a new division of labour emerged between seafarers and dockworkers. A parallel process took place in aviation, when airport work developed over decades. The division of labour has created new occupations such as check-in, handling, mechanics, social assistance, and call centres. However, given the sometimes arduous tasks of the so-called "glamorous" cabin crew workers in the early days of aviation, the ban on female workers in the cockpit and the gendered vertical division of labour in aviation had to be naturalised in the aftermath.[82]

According to Seligson (2019: 25), the specific working conditions in the air have led to particular occupational illnesses such as "frequent upper respiratory infections … compromised pulmonary function". In addition, "… [d]ry cabin air and insufficient time to drink or urinate can cause recurrent bladder infections in women cabin crew." (ibid.). Furthermore, exposure to cosmic ionising radiation can lead to higher levels of infertility, miscarriages, and menstrual disorders (Lauria et al. 2006; Seligson 2019: 25). In a recent study of Portuguese flight attendants, Varela et al. (2019: 15) state that international travel also affects the occupational health of flight attendants when it crosses multiple time zones and disrupts sleep patterns. It can lead to hormonal dysregulation, which is linked to "diabetes and certain types of cancer" (ibid. 15).

In particular, deregulation as a result of the Open Skies policy has led to a deterioration of working conditions in the air, as discussed in part above in relation to racialised exploitation patterns.

While precarious working conditions have also become more common in Europe and among Portuguese cabin crew, the picture is different for Brazilian airlines. Unlike in Europe, the Brazilian state has only opened its skies to 20

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82 The naturalisation of the division of labour has become so entrenched in society that even progressive feminists in the late 1960s were debating "whether women had the upper arm strength to pilot planes" (hooks 2010: 183).

per cent of foreign companies; the majority of flights are operated by private Brazilian companies, some of which have investors from other countries. As shown in section 6.5.3, the structural power of pilots and cabin crew workers is much more robust than that of European aviation workers because of the companies' heavy reliance on domestic flights. While working conditions for airport workers deteriorated when airlines such as VARIG went bankrupt or merged, the picture is very different for Brazilian aviation workers. Since 2017, pilots in particular, but also cabin crew workers to some extent, have been able to strengthen their labour position and change certain labour laws in their favour (B64 2018: item 42). These changes excluded them, for example, from the 2017 labour reform and the 2019 pension reform. Both meant a deterioration in working conditions, health and safety, and a reduction in pension payments (ibid. item 9).

b) On the ground

There are many spatial and historical examples of precarious exploitation patterns in the aviation industry. However, as I have been writing this book over the last few years, these examples have multiplied in different ways. The aviation industry in general is affected by the pulsating nature of the movement of capital around the globe. While it concentrates capital at each major airport, it suffers from spatial congestion and seeks to expand into new and less capitalised areas. The industry is also characterised by rapid staff turnover. Here, feminised and precarious exploitation patterns overlap: Female or feminised airport workers are expected to be young, without family responsibilities, good-looking, and available at all times, especially during peak seasons. As they age, the slower and more demanding reproduction of their worn-out bodies and possible family ties become an obstacle to the demand for flexible labour.

In the summer of 2022, there was a global crisis in the aviation industry, leading to the cancellation of thousands of flights in many countries. One of the main reasons for this situation was the lack of staff at airports (Bergfeld 2022). During the pandemic between 2020 and 2022, airlines and the airport industry shed jobs despite receiving conditional bailouts from their governments. Throughout the pandemic, airlines continued to sell tickets for a post-pandemic summer flight season, but the product of (change in location) could not be produced due to the lack of airport staff.[83] The pandemic had not yet ended, and airport workers continued to be the first to be infected with new strains of the Covid-19 virus. Some had also died from the pandemic in previous years. A large number, however, refused to return to the precarious on-again, off-again relationship with the airport business and changed careers al-

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[83] See also: Engelhardt (2022): Der Traum vom Fliegen? Urlaubschaos, Klimakrise, Pandemie - höher, schneller, weiter durch Betrug und auf Kosten von Menschen wie Natur. LabourNet Germany. 14.07.2022, https://www.labournet.de/?p=202309 [Access: 24.02.2025].

together. It is estimated that around 60 per cent of the core staff left the business (ibid.).

The economic situation during the pandemic left workers struggling for job guarantees and wages, undermining the health and safety concessions they had previously won. The metabolic rift occurred on the side of airport workers, who suffered accidents, injuries, and low pay. By 2022, however, the picture had completely changed: The industry suffered an unprecedented staff shortage and struggled to keep workers in the industry. At airports such as Düsseldorf in Germany and London Heathrow, for example, airport workers received an 18 per cent pay rise, amounting to an extra £6,000 a year in London.[84] The threat to the aviation industry of collapsing and missing the first open summer season "after" the pandemic was existential for many airlines.

Since the advent of mass tourism and low-cost airlines, many of the tasks formerly performed by cabin crew have been outsourced to new work groups on the ground, as discussed above. The "new" work groups mainly perform manual labour, but also caretaking and organising tasks in the handling, assisting, and call centre sectors. In contrast to dock work or physically demanding jobs in male-dominated occupations, manual work with a female predominance is less researched.

Nevertheless, in the following sections, I will use my collection of codes from the interviews to underline the argument for the acceleration of the metabolic rift for the labour force at the air chokepoints in Brazil and Portugal, before the Covid-19 and summer 2022 crises.

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84   See for more details LabourNet Germany: Luftindustrie am Boden: Weltweite
      Arbeitskämpfe als Reaktion auf die "Cost-Cutting Crazyness",
      https://www.labournet.de/?p=202526 [Access: 14.07.2022].

7.2 Tasks in Today's Port and Aviation Industry

In examining the risk of metabolic rift to workers, it is helpful to look at their physical and mental tasks and how they use their bodies and minds to perform them. There are many such tasks in both the port and aviation industries. However, it is possible to divide them into manual, operational, and social tasks.

Manual tasks include lifting, carrying, undoing, fixing, wiping, sweeping, scrubbing, and pushing vehicles by hand. Operational tasks include driving cars, lorries, and bridges, using cranes and machinery to lift and load, and using computers and software to organise processes. Social tasks involve communicating with passengers by telephone, in person, or by e-mail. They involve a combination of speaking and writing skills in different languages and aesthetic and social skills such as listening, asserting, reassuring, explaining, helping, organising thoughts and questions, and representing the company. They also require extensive knowledge to explain certain critical aspects of transport.

In the cargo port sector, workers are mainly engaged in manual and operational activities. The manual work involves lifting and loading sacks and a wide variety of goods. In Santos, for example, these include oranges, pulp, coffee, sugar, cement, and soya. In Lisbon, dockworkers handle medicines and manufactured goods, such as blades, wood, and finished goods. Another manual task is called "lashing and unlashing". This involves physically securing containers with large bars weighing up to 60 kilograms (lashing). The containers are lifted to heights of up to 20 metres by dockworkers using a bridge, crane, or van carrier. This requires the dockworkers to climb or be lifted onto the container staples to secure the containers. This work is physically demanding and dangerous, especially during storms, heat waves, and other extreme weather conditions.

Operational tasks include, for example, driving bridges or cranes. These are like little trains on tracks along the waterfront that can move back and forth along a railway. Bridges or cranes can be up to a hundred metres high. Crane operators on these bridges move what is called a spreader, which can be compared to a giant grab arm with adjustable size. Spreaders are useful for picking up containers from a ship and transferring them to a lorry or train, and vice versa (P33_1 2019: item 19). Grabbing and moving containers from a considerable height is a strenuous task and requires a lot of concentration. If the spreader fails to grip the container correctly or to place it correctly on the vehicle, this can lead to serious accidents. There are also smaller cranes and baggers used, for example, to transfer waste from one ship to another, or other general cargo.

Workers also drive smaller cranes around the port, which are attached to lorries that can also move containers flexibly. And then there are the control-

lers, who check which containers are placed next to each other and how many containers are loaded on a ship to ensure the safety of the transport process. Inflammable material should not be placed next to containers with explosive material, for example. Containers must also be checked for radioactivity.

Every container has a number and can be tracked throughout its journey. It is still the case that ports (and airports) remain places of smuggling, and trafficking in drugs, weapons, illegal goods, and human beings. According to an interviewee at Lisbon airport, the number of workers involved in illegal activities has increased since the austerity crisis in Portugal (P16_1 2017: item 94).

Civil airports require all three types of tasks (e.g., manual, operational, and social). Although the automation processes of the last 30 years have eliminated many manual jobs, there is still some handling work. This is particularly true of airports in Brazil, which have a higher proportion of freight and cargo airports than Portugal. In addition, although most of the baggage handling process from check-in to the aircraft is mechanised and automated, baggage handlers still move baggage from the vehicles to the aircraft fuselage. Refuelling, aircraft, and airport cleaning are also manual tasks. In addition, social assistants at Lisbon and Santos Dumont airports have to perform many manual tasks when lifting and sometimes carrying passengers with mobility impairments to their seats (P22_1 2017: item 4). They also carry their luggage and additional necessities and equipment such as respirators and wheelchairs (P32 2019: item 47).

Operational tasks include turning the aircraft around, driving the baggage and cargo vans and moving the fuel tanks from the hangar to the aircraft. Operational tasks are also predominantly performed by call centre staff. As described in the previous chapter, they have to work with several different software programmes, change tickets, request extra space on the plane for medication in the fridge, or oxygen bottles, organise social assistants for disabled passengers, unattended children, animals, etc. But at the airport, workers also need to know where to walk, which corridors to use, and when to avoid being run over by planes, vans, and buses. Learning about safe passageways requires a lot of training and time, which companies tend to ignore, especially when workers work for changing outsourced companies. In the port, as at the airport, workers need to focus on constantly choosing the right aisles and positioning containers to keep colleagues, passengers, and themselves safe in an industry that is constantly trying to speed up its turnaround time.

Airport workers also need many social skills to do their jobs. They have to communicate with passengers who speak different languages or no language at all. They must meet needs and requests, read faces and gestures, and know how to provide first aid in an emergency.

7.3 The Tug of War in the Metabolic Rift at Chokepoints

As discussed in section 5.5, I operationalise workers' health and safety concerns and experiences of precarious work as temporal and spatial conflicts in the metabolism of social reproduction, likened to a game of tug-of-war. The physical and mental boundaries and localised decisions about when and where to reproduce are the consequences of ongoing temporal and spatial conflicts between workers, companies, and the materialised power relations in legal systems, e.g., the state, as will be discussed in the next chapter.

For this section, I selected temporal autonomy, turnover time, lack of training and break times for the specific temporal conflicts in ports and airports in Brazil and Portugal. For spatial conflicts, I categorised the reports in the interviews on workplace problems with maintenance, distance, and reproductive space at the workplace. In the case of the port sector, I added the spatial conflict around the location of the cleaning of work equipment.

7.3.1 Temporal Conflicts at the Ports in Lisbon and Santos

Thanks to the sophisticated mixed-methods study by Fatíma Queiróz et al. (2019),[85] it is possible to work out a clear-cut temporal dimension of the conflicts regarding the potential metabolic rift in the port sector. Queiróz et al. conducted figures on different physical injuries and chronic pains, as well as the number of accidents experienced in Santos and Lisbon between 2010 and 2015 (ibid.). Most of them were related to manual work and some to operational work. In addition, she collected all information on shifts, breaks, and overtime. In several studies where she analysed her data together with dockworkers and union representatives from both ports, Queiróz compared temporal autonomy in the choice of break times and shifts with the number of accidents and illnesses experienced.

a) Temporal autonomy in ports
One of their main findings is that the number of accidents is significantly higher in Lisbon (89.3 per cent) than in Santos (47 per cent) (Queiróz et al. 2019: 81). In addition, the number of chronic fatigue cases is one third higher in Lisbon (39.3 per cent and 18.3 per cent permanent). In Santos, the number

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85 Between 2009 and 2015, Fatíma Queiroz conducted a representative quantitative study among dockers in Lisbon (112 out of 317 workers in 2015) and Santos (443 out of 4,430 "avulsos", between 2009-2011). It was discussed and evaluated in many different papers together with participating dockers and trade union officials from Brazil and Portugal. I refer to the paper she wrote together with dockers' union officials in Santos and Portugal, Ricardo Lara, and António Mariano, in 2019: "Organização do Trabalho e Saúde do Trabalhador em perspectiva comparada: portos de Santos e Lisboa".

of dockers suffering from generalised fatigue is 18.4 per cent, which is only half that of Lisbon. The figures for both ports are similar when it comes to chronic pain, such as lower back pain, upper back pain, and knee pain, that accompanies port work and how it inscribes itself in the working body. However, the marked difference in the experience of accidents and fatigue raises the question of why the figure in Lisbon is significantly higher than in Santos. I argue that the difference in numbers between the two ports lies in the temporal dimension of reproduction and autonomy in accessing reproductive time.

In Santos, the regulation on shifts is "six hours, depending on the choice of work and the demand for ships at the quay", while in Lisbon it is "eight hours a day, 40 hours a week, with extra (additional) hours on working days and/or weekends according to the demand for ships at the quay" (Queiróz et al. 2019: 58; own translation [AE]). In Lisbon, almost all (97.9 per cent) of the 317 dockworkers tend to work double shifts, with each shift lasting eight hours. This means that workers are likely to work 16 hours a day, seven days a week.

By comparison, 86.5 per cent of dockworkers in Santos tend to work double shifts (Lage 2016). However, especially the "avulsos", the daily contract workers in Santos, have a high degree of autonomy over their shifts and are not bound to a Monday to Friday working week or overtime. They can choose when to stay at home and when to return to work. At the same time, a shift in Santos is only six hours long. Even if they do double shifts, they still work four hours less in a row than Portuguese dockers.

In Santos, Brazil, workers contested the intention of a new labour law to introduce a mandatory 11-hour break between shifts (B51_4 2018: item 5). Their response to the law seems to contradict health and safety concerns: forcing the employer to agree to an 11-hour break would reduce chronic fatigue and subsequent accidents. However, this regulation would also reduce Santos dockers' temporal autonomy over when and where to take breaks and lessen the number of shifts and their wages (B51_4 2018: item 4; B58 2018: item 16).

This lack of independence in taking shifts and breaks and longer working days correlates with more workers suffering from chronic fatigue, which increases the risk of accidents. A dockworker in Lisbon reported that there has been a fatal accident every two years since he started working in the port of Lisbon (P33_1 2019: item 10). Between 2001 and 2021, there were ten dockers "who never went home to sleep again". (ibid.; own translation [AE]).

These figures are essential when considering the role of choice and control over when to work and when to rest and reproduce. There is a combination of higher levels of chronic fatigue and accidents with a lack of self-control over working time. It shows how the employers' gain in the tug-of-war over workers' time can lead to a serious risk of metabolic disruption for workers and their bodies in the ports of Santos and Lisbon. One dockworker reported that in Lisbon, until a new collective agreement was negotiated in 2016, absenteeism had

increased, leading to a vicious circle of more overtime and accidents (P33_1 2019: item 45; P33_2 2019: item 1).

b) Overtime in ports

In addition to the issues of time, leisure, and autonomy, and the number of accidents in Lisbon's ports, the SEAL union also raises the issue of overtime. Each sector can negotiate a limit on overtime with the government. In the port of Lisbon, the limit for extraordinary hours is 850 per year (P33 2019: item 45). However, this amount is already used up in the first four months of the year (ibid.). The union is therefore demanding permanent employment for all workers currently on temporary contracts. The temporary dockers are only supposed to work during the overtime period. These are fixed hours from eight in the evening to five in the morning and on Saturdays and Sundays. Suppose, however, that the core dockworkers' overtime is already used up in the spring. In this case, the temporary dockworkers will have to work regularly in the overtime slots for three quarters of the year to fill the gaps. The fixed core workforce is, therefore, far too small to meet the growing demands of the port industry. The core workforce should be growing accordingly.

This problem is reflected in the study of Queiróz (2019: 70; own translation [AE]), when she posed the following question in her research: "Is the number of workers per team (suit) sufficient to carry out the work?" In Santos, 45.3 per cent of respondents answered no, while most found it sufficient. In Lisbon, only 18.8 per cent of workers felt that the number of workers per team was sufficient, while the majority, 81.1 per cent, gave a negative answer. The figures and responses suggest that dockers in Lisbon are working far more overtime than is legal and physically healthy for their bodies. As one dockworker in Lisbon commented (P13_1 2017: item 58):

… [Y]our body just gets all messed up, you know? So, who tells me that even with all the … health and safety procedures, the risk is over, too, because they don't give [us] the conditions. And if you stay in a precarious situation, you cannot afford enough to fulfil your personal aspirational things in life, you are forced to work, work, work, work.

This quote is a good illustration of how the rope in the tug-of-war game is pulled over the edge, leaving the workers exhausted. The extension of working hours also means that this component is used to justify the employment of dockers on temporary contracts, even though they are needed in the core workforce. Wage costs are saved based on the health consequences of the core and flexible workforce.

This temporal conflict has also been reflected in industrial struggles at both chokepoints over the past decade. In Lisbon, dockers fought for the permanent integration of temporary workers into their pool and the dismantling of the agency. In Santos, although overtime and temporal autonomy are less likely to lead to a metabolic rift than in Lisbon, there are many health and safety concerns, including a lack of reproductive time and the risk of accidents, which

also push workers to eventually leave the occupation. As a former dockworker from Santos reported:

I worked there for 25 years, but it was no longer possible at some point. I have seven children. I couldn't take care of the children enough with these flexible working hours; I never knew when I had time. … Then there are the many accidents. Once, I almost died! A container had come loose and fell, and I could just jump to the side! The work is very dangerous (B44 2018: item 6; own translation [AE]).

c) Training time in ports

The third temporal conflict concerns training time. One of the industrial disputes in the port of Lisbon was over new labour legislation in 2012 that allowed workers to become dockers with only a few hours of training (P13_1 2017: items 63-64):

… [O]ur law is that for you to be a dockworker, you just need to spend one hour inside the port, and you are a docker. Imagine this. … That's what our laws saying, which is ridiculous. And so, we need to review the law.

The long-standing closed shop of the unionised labour pool also meant that the dockers could not ensure sufficient training for new generations to prevent accidents that could harm all dockers. The new law from 2012 also allows sub-contractors to employ workers in the port, with the aim of breaking the union stronghold and reducing wage costs. One of the arguments for such a move is the increased automation of ports, which would require less training and fewer manual tasks. But as dockers from Portugal and Brazil pointed out, automation requires more training time, not less:

From the business part of things, a lot of training is asked for, and on the part of the workers, a lack of training and lack of education inside the ports. (P13 2017: item 4)

In Santos, training is provided by a school that uses crane simulators, but these do not adequately reflect the working conditions of bridge workers. Nevertheless, various groups of scientists who regularly visit the port are also putting forward such ideas. As one Brazilian bridge worker commented:

It's nice to play video games, but my work! Never. A sub-team formed in the area, now the guy has a crazy idea of how the port works and wants to put it in … We went through with some academics who are only scholars. Talking and defending the issue of technology and the technology we export … the technology is for the charts. … This number of workers remains adequate to take care of that operation. (B67 2018: items 10-15; own translation [AE])

Despite automation, dockworkers also want more training in health and safety knowledge, and "best practices" for working without injury. Two port workers in Lisbon reported the following:

I have no training to deal with this kind of thing. It's like self-taught, you know, these things happen. You should be aware of this and should be aware [of that]. And, of course, you want to start working with some of our, I would call it, the best practices (P13 2017: item 52)

By law, it is compulsory to have the training, but there is a training, an initial training, basic training, and then some are taken, and they do this training. So, the training is given by schools that speak generally. Normally the training has a theoretical part that is given by the Certified Training Centre, which is the role of us to be able to get companies to obtain the training certificate, and the … practical part is addressed by a stevedore or another that chooses to do so. … The problem is that the training is often very basic, so the worker, when he goes to work here, does not have a good notion of the risks. He has a notion that he has to hook this, he has to do this, he has to do that, he has no notion of risks, he has no notion that in this position he can be in, he has no notion that the cargo must not pass over him. If a young worker begins to do his job and doesn't know the risks, then something is wrong with the training because you can die there. So, these things and all that makes us want to change everything every day because everything is wrong. (P33_1 2019: item 26; own translation [AE])

Health and safety risks were raised in relation to masculinist exploitation patterns and the proud refusal of some dockers to wear protective gear. From the perspective of precarious exploitation, a lack of training limits knowledge of risks and exposes workers to accidents.

In summary, the temporal conflicts in the port sector are closely linked to the temporal autonomy of shift work. This autonomy is very low in Lisbon and still contested in Brazil. The struggle over overtime is also evident in Lisbon, where the core workforce is trying to get more workers on the team, as they suffer from chronic fatigue and a high number of accidents. In addition, training time seems to be a temporal conflict between companies, governments, and dockers, who have different views on the length and necessary content of such training, especially with regard to knowledge of health and safety at work.

7.3.2 Temporal Conflicts at the Airports Humberto Delgado and Santos Dumont

In the case of the aviation industry, I did not find a study as detailed and insightful as the Santos and Lisbon cases, such as the work of Fatíma Queiróz. However, in one of the few case studies on ground baggage handling, André Carlos Vaz Junior (2012) analyses the movements of handling workers at Santos Dumont airport and possible threats to health and safety. He notes that around nine per cent of handling workers in Brazil are injured each year (ibid. 597). The majority of these injuries are to the back. Korkmaz et al. (2006) point out that in an international study of occupational health and safety, the rate of lost time injuries per 10,000 full-time workers was highest in scheduled airline baggage handling. It was even higher than in coal mining or construction, mainly due to back pain. Given the airport crisis in the summer of 2022, I imagine that new studies on airport work will undoubtedly emerge. Here, I can only use my qualitative data to explore the potential cracks in airport work.

a) Turnover time in airports

In the airports of Rio de Janeiro and Lisbon, the conflict over time plays a different role from that in the port sector. Here, too, I encountered precarious exploitation patterns. In the airports, it is characterised by other temporal aspects that are less linked to the actual tasks. One is the turnover of workers in their position, which is comparatively rapid at the airport, with serious consequences for the aviation industry in 2022. In the port, many workers are employed for decades, although, in some cases, they depend on daily contracts. In contrast, airport workers change jobs much more frequently (B59_1 2018: item 4; B62 2018: item 3). Some colleagues report that they worked at the airport for a while, then became unemployed, and then were hired again for a few months (P26 2017: item 7). There are changes between different times of the year: during tourist seasons, such as Carnival in Rio (B62 2018: item 2) or summer time in Lisbon, more workers are hired who would work less outside these peak periods, or are even laid off altogether (P22 2017: item 7). As a Brazilian airport worker reports (B62 2018: item 4; own translation [AE]):

Young people enter aviation in the first place with the mistaken view that they are going to work hard … "I'm going to travel a lot, I'm going to get to know the world, I'm going to get to know Brazil!" They come in knowing that they're going to combine work with leisure and well-being. Little later, they lose that one.

The rapid turnover of workers at the airport also makes it difficult to organise, as already mentioned in section 6.4.3. This situation can hardly be maintained for long. As the Lisbon worker (P22 2017: item 69; own translation [AE]) pointed out:

And there's also the risk of continuous shift work. It's a real risk that wears you down, destroys your dream, makes you age much faster, and gives you more chances of gastrointestinal problems, cancer, and so on.

All in all, the rapid turnover of workers and the constant uncertainty about whether a new contract will be signed keep workers in a constant state of anxiety.

b) Overtime in airports

Comparable to the port industry is the amount of overtime that airport workers do to keep their temporary jobs. In Brazil, an airport worker (B63 2018: item 35; item 42; own translation [AE]) reported:

It was not proportional to the growth of the sector because it has a lot of overtime. There is a lot of pressure and moral harassment allied to the crisis with unemployment in Brazil. … In several episodes, we've seen the same thing over the years. I'm the oldest, and in over 20 years, we lost lives in the airports to the company's negligence for excessive working hours for those who carry out dangerous activities. The longer you stay in it, the more you can be at risk.

Overtime has increased for airport workers in both Brazil and Portugal. They usually work part-time, with shifts of between four and six hours, depending on the job. Overtime is often not paid adequately or at all. The need for speed puts airport ground handlers at risk. In his study on baggage handling, Vaz Junior (2012: 603; own translation [AE]) recommends

… [T]o reduce the frequency of lifts per minute, given that this was shown to be extremely high in all cases analysed. The need to decrease the speed in which the task is performed was associated for more than 65 per cent of the employees in this industry as being relevant to the reduction of back injuries.

However, a larger number of workers would have to be employed to do the same job (ibid. 603). Instead, the remaining workers have to work longer and faster.

Due to the time pressure of too few staff and the need to work overtime despite not being paid enough, the social tasks of airport workers cannot be adequately carried out, especially with regard to the transport of passengers with special needs. A Portuguese worker at Humberto Delgado airport reported (P22_1 2017: item 6; own translation [AE]):

Today, there are about 200 of us. And it is a service that has a growth rate of about 30 per cent a year. We must assist up to 800 people a day. So, people think that this is not a lot of people, it's not true because the airport has grown a lot. After all, there is a very elderly population travelling, mainly by Portuguese emigrants, but also by senior citizen tourism and so on. So, we have many services to do. One day, 800 people and that many people are not an option for us. Today we can assist less than 350 to 400. But in the summer, there are normally 600 to 650 on a worse day.

Despite the need to support at least 600 to 800 people, the staff can work with less than half the required number. They work overtime, but they are unable to provide the necessary social services at the airport. A Brazilian colleague (B63 2018: item 21) from Santos Dumont reported on the consequences of this overtime pressure on social tasks:

These are the people with special needs who travel. It's logical that as the airport receives more passengers, the number of people with special needs also increases. These people are the biggest victims. I have to tell you the truth. … They are the biggest victims of the problems workers at airports often suffer. [They] would not give a proper treatment because the airline or then today's airport manager does not facilitate things.

Low-cost airlines in Europe and privatised airlines in Brazil have reduced costs and allowed more older adults and people with special needs to travel by air. EU countries also require airports to provide easy access and social assistance for people with special needs to enable inclusive mobility. However, the time available for assistants to carry out their social tasks is too short to carry out their actual job, leading to frustration and "friction" between staff and passengers (ibid.).

This problem is also reported by call centre staff who work for the airlines and have to arrange social workers, extra oxygen, medical support, and other equipment for people with special needs. If there are not enough social workers available, they are the other end of the stress. In addition, one informant reported that their break times are short and often inaccessible. Call centre workers have to wait for the next break if phone calls take longer than the scheduled break time. Going to the toilet also counts as a break. As long as one person per team is in the toilet, the rest are not allowed to leave their desks (P14_1 2017: item 10). The interviewee described that scheduling breaks and ensuring that workers from the same team do not go together took up more time for managers than completing tasks (ibid.). Meticulous monitoring of break times and limited access to them caused stress and exhaustion among call centre workers. In general, the time they worked during their breaks was not paid extra and counted as unpaid overtime.

In Brazil, at least, pilots and cabin crew have managed to counter this time conflict by linking it to flight safety. Since the mergers and bankruptcies of Brazilian airlines in the 2000s, overtime for pilots and cabin crew has also increased. As two major accidents in 2006 and 2007 showed, the increasing flexibility of the restrictions affected the safety of flights and thus their own lives (see more in section 9.4.4).

So, these changes that we achieved several are related to flight safety; we managed to increase the number of days off, and the aeronauts' rest is better today. We managed to limit the number of consecutive dawns. So, we also managed to limit the number of nights off, which we call a period of only one day off if an aeronaut could stay two nights at home and not just one night. So, we have achieved many improvements that directly impact flight safety (B64 2018: item 11; own translation [AE]).

The fight against overtime also meant regaining temporal autonomy over the night and consecutive shifts at dusk or dawn, which are incredibly demanding for workers and conflict with the day and night rhythm.

c) Training time at airports
The short time workers spend at the airport also increases health and safety risks. Rapid turnover is linked to a lack of training time and the fear and pressure to perform tasks without adequate preparation or knowledge of possible risks. In the case of health and safety risks, a Santos-Dumont airport worker reported (B63 2018: item 42; own translation [AE]):

There are technical norms to be followed. Certain loads have to be positioned inside the plane. When this doesn't happen, the workers' lives are at risk. This has already happened on a Gol flight to Natal. Workers who were working on this aircraft; the product was not properly packed. and these workers were infected and had to stay some days – hospitalised for three days. This was considered an incident, and the union only found out after these workers had been hospitalised. What was the toxic chemical material that the workers were exposed to? We found out that the aircraft was not supposed to carry that kind of cargo, but the companies were greedy to make money.

Workers were either unaware that the exposure was toxic or had to ignore it to save their jobs. Both options put them at risk and highlighted how precariousness and rapid turnover could lead to a metabolic rift. An airport worker from Lisbon reported an incident at Porto airport (P37 2019: item 37):

Here, a few years ago, there was an episode that we managed. … It was a worker who didn't even have a licence valid enough to be able to drive [mobile conveyor belt]. … And his boss said to him: "You don't need to have everything, you have everything! Go and wash this load off the plane!" It was a mobile conveyor belt to unload the luggage. And he went and hit the plane … and reported it; how it has to be done and how it is important. He became the victim of a disciplinary process.

The worker was not sufficiently trained to drive a mobile conveyor belt, as he did not even have a driving licence. Nevertheless, management told him to work with a vehicle he could not control. If he had reported the damage he had caused to an aircraft, he could have prevented further risks to the crew and passengers of the vehicle. However, to cover up their mistake of forcing the worker to perform a task for which he was not trained, management fired the worker for reporting the incident. The informant points out that the union had to fight and win the case in order to keep the workers' confidence to report damages and problems. However, workers still stopped reporting incidents for fear of being fired themselves (ibid.). Such an atmosphere not only puts other workers at risk, but also the aviation industry as a whole, if aircraft are thrown into turbulence by unreported damage.

A rapid turnover of labour is associated with a short training period and, therefore, a lack of knowledge about safety risks, which can lead to damage and injuries. As another airport worker from Lisbon reported (P22_1 2017: item 49; own translation [AE]):

You're liable to fall from a certain height until a wheelchair passes by, and I've already had this happen to me over my foot, and I might be [damaged] or a car might not see you – [this is] a job in a place that has many risks and you have to be alerted.

It is also linked to the constant fear that this temporary contract could be the last one, which forces workers to access tasks without knowledge or to refuse to report damages in order to stay under the radar (B60_1 2018: item 1). Airport workers tend to perform tasks for which they are not prepared; they are afraid to report consequential damages; they are not sufficiently trained and do not know the risks in their workplace.

The tug-of-war in the aviation industry over rest periods has put workers at risk. Exact figures on specific injuries, fatigue, and experience need to be gathered in the future. However, it is clear that there is a risk of a metabolic rift that affects more than just the workers. The industry may also be affected if fatigued pilots fly aircraft that may have been hit by mobile conveyor belts, or if workers do not report injuries for fear of being dismissed. The growing number of airport assistants also needs to be properly equipped. Airports also need paid

staff to treat passengers respectfully and according to their needs. As the aeronauts in Brazil have shown, the tendency to push workers over the edge of a temporal metabolic rift can be challenged and reversed. In their case, however, the specific spatial history of aviation in Brazil also allows pilots and cabin crew to resist. Pilots and cabin crew workers in Portugal are still at a disadvantage due to the large number of airlines, railways, and roads and the small spatial distances in Europe.

7.3.3 Spatial Conflicts at the Ports in Lisbon and Santos

As noted above, precarious exploitation patterns are characterised not only by conflicts over time, but also over space. For the port sector in Brazil and Portugal, this means struggles in the workplace itself. In these struggles, workers aim to carry out their work in a healthy way that does not interfere with their reproductive time. The spatial conditions of the workplace itself must be secured. In the case of port labour, workers work with various machines that can pose risks to their physical safety if they are not regularly maintained.

a) Maintenance in ports
Interviews with dockworkers, particularly those from Portugal, reported insufficient maintenance and attention to health and safety standards to allow workers to leave the workplace physically unharmed. As one dockworker from Lisbon reported (P13_1 2017: item: 13):

… [I] nside the port with all these issues of infrastructures, I think the health and safety problems are mostly about the infrastructures. They are very degraded; there was never a real deep investment in infrastructures for many years now, in the last twenty years.

In 2016, a number of dockers set up a health and safety committee within the union to address a lack of standards at the port of Figueira do Foz. One spoke about the container crane, which allows workers to pick up containers with a so-called "spreader" (P33_1 2019: item 22).

And the spreader is not for transporting people. And the spreader itself had, in this case, Figueira da Foz had a sticker that said that personal transport was forbidden, so a stevedore didn't want to transport the crew member close to the ship in the spreader. … There are things called "safety cages", which are cages, they are boxes with a container, but it's an open container prepared to transport people. So, we saw workers on top of the ship or on the floor, but we couldn't see a [safety cage]. So, we sent … an exposition to them saying that the transportation of people is not correct, … you have a sticker that says that you can't transport people. And what did they say? "Let's take the sticker off". … And this more or less shows you what it is to talk about hygiene and safety here; it's kind of getting around the situation, it's not doing things, it's not going through the best procedure and not going against the law. There's a sticker that says that you can't transport people, so you take the sticker off, and you can. … So, they get on the spreader until any situation when there is a death maybe [they] will then buy a box.

Health and safety concerns and the spatial conflicts associated with the Social Reproduction Metabolism of workers are as much a question of cost as of time. Capitalists not only provide and own the place of production. They also control the spatial conditions and how they affect the workers.

The refusal to invest is also linked to the protective equipment, overalls, and helmets that workers are required to wear. There is also a lack of uniforms adapted to the climatic conditions of the workplaces themselves. A child of a former dock worker in Santos reported (B45_4 2018: item 17; own translation [AE]):

Think of summer when it is 40 degrees outside on the ship. Imagine a stevedore in an unhealthy … ship carrying a sulphur load in the hold. He is doing his part to remove the cargo from the ship's walls. Inside it is 50 to 60 degrees hot, and it is impossible just to walk around in overalls. Not even every little part of the [body and head] is completely covered. Unimaginable!

It is evident that there is a need for a different type of uniform that can be worn in such heat and at the same time protect workers from the toxic and hazardous materials they have to load. Heat and materials are dominant aspects of the port workplace. The need for such special equipment is not new. However, it is expensive and has not yet been made available to workers.

b) Spatial distance

With regard to reproductive spaces, as mentioned above in Santos, dockers have had to defend their autonomy to take breaks. A law, initially intended to improve health and safety in the ports, required dockers to take an eleven-hour break between each six-hour shift. But because they live far from the docks, they have to travel up to eight hours back and forth. Thus, they work several shifts at a time and then stay home for a few days to recover. Taking a European health and safety law and implementing it in a postcolonial, large-scale context creates problems that are unfamiliar to the short distances of Europe. The distance between the workplace and the reproductive space can also undermine reproduction because of long commuting distances, linked to a lack of housing near the workplace or, conversely, a lack of work near the home. In the case of Santos, the child (B46 2018: item 4; own translation [AE]) of a retired dockworker stated:

So, like the port of Santos, it's very, very big, and sometimes he'd get to work in more distant places, and the work sometimes lasted five hours, then he'd have to get another one, then sometimes he'd have a period of half an hour to rest … He had already worked there, eaten something, and slept in the hold of the ship because an hour later, 40 minutes later, he had to get another job that he didn't even talk about. So, sometimes, my father did not return for the whole week because that was the period he had work, so he had to take advantage of it. He took everything he could and therefore worked long times away from home.

The distance between the place of work and the place of reproduction did not allow the worker to return home and forced him to reproduce in very precarious

conditions, sleeping anywhere but in a bed or a safe place to ensure the whole reproduction of the family in the long term.

In the study by Queiróz et al. (2019; own translation [AE]), there is also a section on the eating times of port workers. The questions are: "Do you have an eating break? If you have a break to eat, do you think the break is long enough to eat, recover, and continue with work activities?" Here, the figures are almost reversed from the discussion of time autonomy above: While 97.3 per cent of Portuguese dockers answered "yes" to the first question and 75.0 per cent to the second, only 38.4 per cent of Santos dockers responded positively to the first question, and only 31.8 per cent to the second. This response points to a spatial problem: ports in Portugal are much smaller than in Brazil, where Santos alone covers many kilometres to get from one terminal to another. Access to a canteen, café, or rest area takes much longer than in the smaller ports. Over a longer period of time, this physical distance reduces the working capacity of the dockworkers, who do not have enough time to rest and recover in safe and caring places, but sleep in the port because there is no accommodation close to the port.

A poem by the son-in-law of a Santos dockworker sums up the spatial conflict in the Social Reproduction Metabolism of dockworkers; he writes:

I work very far away from home; therefore, I return late.
And to spend some time with my family, I go to sleep late, too.
But I work very far away from home; therefore, I get up early.
And to endure fatigue during work, I drink coffee, a lot of coffee.
But I work very far away from home; therefore, the way is long.
But I do not sleep on the bus.
Because I drank a lot of coffee…[86]

When I had the opportunity to travel with a dockers' family between home and work, I became aware of the huge distances and time spent on buses or Ubers, with no alternative trains or sometimes even motorways, which can leave buses stuck in traffic jams for hours. It is impossible to sleep on the bus, which is often overheated, the seats are uncomfortable, and the buses run too infrequently and are therefore overcrowded. Distance and the need to commute reduce working and reproductive time and keep workers in transit spaces where they can neither produce nor reproduce.

The lack of rest also leads to a lack of concentration in the long term. A dockworker from Santos reported (B58 2018: item 29):

One minute of distraction can lead [someone] to lose a limb and can die. I've seen two fellows. One lost a limb in front of me. And I've seen him with two limbs and then with one limb. And I have seen a man in front of me working in the hold of the ship. [He] died – a minute and a half before he died, I said, be careful what he was doing was dangerous. … One minute and a half after the fatality happened, he died.

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86   Own translation [AE].

The informant linked this to the lack of concentration and fatigue of workers in the port. Witnessing such accidents can also lead to post-traumatic stress disorder if not treated professionally. It may then be "cured" by drug abuse among port workers. Drug testing, as discussed above, is then often used by port authorities to justify union busting.

c) Cleaning space

In addition to the spatial conflict over maintenance at work and the distance between work and home, workers are also fighting for reproductive spaces at work. In Santos, trans or non-binary workers were particularly concerned about the lack of sanitary facilities to protect them from unwanted glances and questions. As one worker reported (B39 2018: item 10; own translation [AE]):

One thing that caught my attention was this women's bathroom, men's bathroom. Suppose we are in a new perspective of social structure. We have to break this … it was a question for me to use the bathroom there, for example. There are two times when I went to the bathroom and entered the men's bathroom, and they came to question me, "It's not women's bathrooms."

Nogueira and Costa's study (2019: 105) also mentions that not only trans and non-binary, but also female port workers in Santos did not have reproductive spaces where they could change or use the toilet. Because of the long distances between terminals, there is a need for more facilities where access to changing, toilet, and cleaning facilities would be provided. In particular, there is a need to shower after two shifts before travelling home, which is more than two hours away. But here again, gendered and precarious exploitation patterns conflate and deny the working and reproductive conditions of some marginalised "token groups". These conditions can reduce the productivity of workers who are constantly worrying about when and where to use the toilet, shower, or changing room.

d) Home cleaning of gear

A third spatial conflict was linked to the new labour reform in Brazil in 2017. According to a dockworker on an oil platform in Rio de Janeiro, the new legislation allows companies to refuse to clean work equipment. The space in which cleaning takes place is moved from the production site to the private reproductive sphere. This conflict over space seems to be a minor, if annoying, aspect. However, in the case of oil platform workers, it poses a real health risk. The clothes worn by Brazilian oil platform workers are contaminated with dust, oil, and toxic substances. These are, for example, carcinogenic by-products that escape during the extraction and processing of oil (B57 2018: item 4). The new labour reform of 2017 now forces workers to take their clothes home and clean them privately, which used to be a professionalised activity, necessary because of the health and safety implications of privately washing clothes soiled with toxic dirt. As one affected informant pointed out (ibid. item 17; own translation [AE]):

Before the reform, companies were obliged to wash uniforms. So, imagine I'm working, and I take a bath in gasoline. If I get home and take these clothes and wash my wife's clothes, they will contaminate her clothes with benzene. She'll get contaminated with benzene, and she could get leukaemia.

It is not only the health of the workers and the danger that the workplace poses to their own Social Reproduction Metabolism that is at stake, but also that of their relatives. This spatial conflict, in turn, is linked to additional costs that the state company Petrobras, which is responsible not only for processing and transporting oil but also for decent working conditions, is unwilling to pay.

In general, the spatial conflicts entail a critical look at the port as a working space. The lack of investment in the maintenance of tools and machines puts workers at risk of a metabolic rift, especially in Lisbon, where the temporal conflict over overtime and temporal autonomy already plays a significant role in endangering workers' health and safety. While temporal conflicts explained the difference in the percentage of accidents experienced in Lisbon and Santos, it did not explain why 47 per cent of dockers in Santos still experienced accidents. In this case, I looked at the distance between the workplace and reproductive spaces, which was highlighted in interviews with dockworkers and their family members in Santos. The considerable distance between home and/or resting places and work limits dockworkers' access to eating breaks in Santos. The failure of port companies and unions to address this issue of space also limits access to adequate sleeping facilities, forcing some Santos dockers to sleep in the hull of a ship before returning home. In addition, Brazilian dockworkers are now forced to take their work equipment home after several shifts and a long journey, with the risk of contaminating households and relatives with benzene or other toxic substances.

7.3.4 Spatial Conflicts at the Airports Santos Dumont and Humberto Delgado

In airports, the spatial conflicts around the metabolism of social reproduction are in many ways similar to those in ports.

a) Maintenance of infrastructure in aviation
In the interviews, workers and trade unionists also linked serious or fatal accidents to the lack of structural maintenance (B63 2018: items 41-42; own translation [AE]):

We have already lost workers due to inadequate protective equipment. We've already lost workers due to lack of maintenance … we lost a co-worker who suffered quadriplegia because the ladder was already damaged. … we had two deaths. Two with quadriplegic. In Guarulhos, we had three deaths, and in Salvador, we also had three deaths in Galeão.

There is a lack of sufficient research to provide a quantitative overview of how many workers are at risk, and in what ways, due to the lack of maintenance at Brazilian airports.

In Portugal, a call centre worker working for TAP reported the lack of maintenance of headphones and chairs (P32 2019: item 3):

… [T]he material was pretty bad. I think we had probably got four hours like breaking the chair. They weren't working because the chairs were not new. They are really old. We don't have individual headsets. So, every person uses them, and the next person [it] is the same, which can lead to infections and everything. And a lot of those didn't have the you know, the sponge … so after a while, it would start to hurt and it's like after an hour or two, which is hard…

Although the risk of incapacity is not as high as for dockers, the spatial conditions and lack of maintenance can not only prevent workers from performing their social and operational duties, but can also lead to back pain or the spread of (ear) infections.

Lack of maintenance has a less immediate impact on workers who literally work with smaller tools. However, the larger the machine and the more space it takes up in the workplace, the greater the impact on the worker and the industry itself. At the Portuguese airport, Humberto Delgado, a ground handling worker, reported on the lack of maintenance at the airport, which also endangered passengers and the safety of aircraft (P26 2017: items 39; 42; own translation [AE]):

… [F]or example we have a staircase to lean against the planes that are 25 years old … We have carpets that the planes have 30 years. And we have machines to load that are also 20, 30 years old. These used ones have already come from Germany. In the meantime, they have already gone to China. We have machines that are getting out of order in the middle of the operation [and] we do not know how to do miracles for the plane to [be] zero-hours [late]. We have things that are badly tied up. We have things that come badly packed, in other words: It's a very very very very very big danger. … It is difficult to understand for those who are not religious; for those who are religious, you can tell God sits next to aviation. And as I am not religious, I don't know how there was never anything serious happening, but for me, it's just a matter of time.

In Portugal, however, workers are not only highlighting the risks to themselves, but also the dangers to passengers and the lack of investment in infrastructure maintenance, which could lead to serious accidents in the future, affecting workers and passengers alike. As reported by the ground handling worker, who also cleans and maintains aircraft (P26 2017: item 3; own translation [AE]):

The conditions of the hangars' installation are very weak indeed. … The water sometimes doesn't work now, like so many others that don't work or complained that sometimes the water doesn't come out at all. And since there is a lot of pressure even though there are few conditions…

The informant highlights a contradiction in the neoliberal framework of the industry: It expects workers to give their best, but it does not even provide adequate maintenance of the workplaces to make proper use of labour power. In this case, it is not the worker's body that is threatened, but the place of production and the very mechanisms that allow the industry to function. It is called into question when it is not possible to transform labour power into a productive force.

Approximately 70 per cent of baggage handlers at airports in Brazil indicated that maintaining tools and using conveyors would reduce back injuries (Vaz Junior 2012: 598). In his ergonomic observation of baggage handling at Santos Dumont airport, Vaz Junior reported that workers used conveyors, but that there were not enough machines available at the same time for all unloading operations. As a result, in some cases, workers lifted the baggage and handed it to the next worker or placed it in the fuselage of the aircraft without any mechanical support, resulting in physically harmful movements (ibid. 601).

In terms of maintenance and infrastructure, workers at Brazilian airports have a long history of fighting for improvements. In particular, as I will show in section 9.3, aviation workers have had spatial conflicts over safe runways and lighting for night flights. Aircraft accidents in and around Santos Dumont and Brazil in general have been frequent, which explains the urge for a safe airport. The majority of aircraft accidents at airports occur during landing. According to data from the Aviation Safety Network, between 1939 and 2016, 35 accidents took place at or near Santos Dumont Airport, 17 of which resulted in around 188 deaths, including cabin crew and pilots.[87] Most of the major accidents occurred between 1946 and 1964. This period saw the first wave of trade union activism in aviation.[88]

The number of air accidents in Portugal is relatively low, with only two fatal accidents in the history of civil aviation at Lisbon airport and around 26 fatalities.[89] The different numbers of fatalities in the history of aviation in the two countries may be another factor in explaining why the labour movement in aviation has developed so differently in the two countries.

b) Spatial distances to social reproduction facilities
Another spatial struggle, with similarities to the port sector, concerns the distance to reproductive facilities in the workplace. As more women workers

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87   Aviation Safety Network, https://aviation-safety.net/database/airport/airport.php?id=SDU [Access: 21.06.2023].

88   Between 1919 and 2021 Brazil aviation had in total about 290 accidents with approximately 3,340 fatalities. See Aviation Safety Network, https://aviation-safety.net/database/country/country.php?id=PP [Access: 21.06.2023].

89   Between 1919 and 2021 Portugal aviation had in total 28 accidents with approximately 754 fatalities. See Aviation Safety Network, https://aviation-safety.net/database/country/country.php?id=CS [Access: 21.06.2023].

entered the airline industry in the 1980s, flight attendants in Brazil in particular fought for 24-hour toilets near or at the airport in order to be able to work at all.

In Brazil today, handling workers at Santos Dumont reported double shifts of six hours. In between, they have to take a break of four to five hours. However, because of the distance from the airport, they sometimes have to walk more than an hour to reach the entrance (B61 2018: items 42; 45). This distance may be related to a work situation where cargo has to be loaded by a certain deadline. In particular, the loading of more expensive goods forces workers to work overtime. Meanwhile, the buses and cars that transport workers between shifts have a strict schedule and will not wait for workers to return to the entrance.

For an hour, lunch return at 18, I open and work from eight to five, losing an hour walking (B61 2018: items 45; own translation [AE]).

The situation of working hours and overtime, combined with long distances, affects the reproductive time between shifts. The combination of factors forces workers to waste time commuting only within the workplace.

c) Resting space

Linked to the previous point, in the Brazilian airport of Santos Dumont, although the airport infrastructure is still public and part of the management of Infraero, about 49 per cent of the shares and services are outsourced. Spaces within the airport can be given to private investors for concessions, which has increased the prices of renting shops and tourist places, making any space very valuable, while denying it to workers (B63_2 2018: item 15). This spatial conflict is highlighted by the infrastructures for work: At the airport in Santos Dumont, workers did not have a changing room for five years, except for a small container near the airport (ibid. item 3). Feminised care work has been casualised, and vulnerable workers have been made invisible and removed from the actual workplace. In addition, there is a lack of adequate toilets and water supply for hygienic facilities, which poses health risks to workers at the Santos Dumont airport in Brazil (B63 2018: item 46).

Call centre workers in Portugal reported a similar problem with access to rest and break rooms. Apart from the fact that, as mentioned above, break times were difficult to access and seemed to exist only on paper, there was also a lack of space for breaks:

We only had like a very small room, which was enough for just, I think, eight people to be comfortable and without any natural light… this was in the fifth floor. So, if you wanted to go downstairs, you took some time to wait for the elevators or to go to the stairs … normally, I would do the four hours at once and … do the break in the middle, but using all the other possible time. So, it would be 12 minutes. I would waste, like, I don't know, two minutes to go up and down or something like that. And downstairs, you would have to be in the front of the building, and it was normally windy with the cars passing and everything. So, this was

one big problem we didn't have enough time, and we didn't have a comfortable place to be during the breaks (P32 2019: item 2).

As I have no further data on the direct physical and mental effects of these reported working conditions, it is unclear how they also ultimately led to a metabolic rift. Only one informant reported directly on the consequences of these spatial conflicts (P14 2017: item 10):

Management and good management of the breaks, that's also a part that's complicated but sublime, like back problems, tendonitis, because you're sitting down making call after call and feeling like a board when you get up.

Such working conditions could lead to more workers leaving the sector, for example, high turnover in variable capital and more workers calling in sick, often without paid sick leave due to the precarious employment contracts in the sector.

In addition to the physical distances for handling and call centre workers, pilots from Brazil reported that before the 2017 labour reform, the distances between home and work were too long to return home between shifts. One pilot pointed out (B64 2018: item 11): "We even gave interviews in the last few years saying that we sleep in the cabins, which was true."

However, the spatial conflicts surrounding the airports in Lisbon and Rio de Janeiro have, at different times, led to metabolic rifts among industrial workers. While back pain caused by a lack of functioning office chairs may not have immediate effects, but only delayed ones, the lack of maintenance of ladders, electrical cables, etc. may have immediate harmful consequences for the working body. In the case of the airport sector, I have collected preliminary data at Santos Dumont and Humberto Delgado. However, more in-depth research is needed on the issues proposed in this section, such as maintenance, distance from home to work and access to space for adequate breaks.

7.4 Concluding Remarks on Precarious Exploitation

The decision to look at the spatial and temporal conflicts at the chokepoints researched in this thesis helped me to understand and analyse workers' issues and grievances along a Marxist-Feminist ontology. The tug of war between capital and labour has very concrete consequences in the daily metabolism of the labouring body between production and reproduction.

I have highlighted overtime and training time as temporal conflicts and similar aspects for ports and airports. There is a more significant metabolic conflict in the docks in terms of temporal autonomy, e.g., when to work and when to take breaks, especially in Lisbon. There is also a struggle over overtime in Lisbon, where the core workforce is trying to bring in more workers,

who suffer from chronic fatigue and many accidents. In addition, training time seems to be a temporal conflict between companies, governments, and dockers, who have different views on the length and necessary content of such training.

In airports, where contracts are much more likely to be temporary, workers struggle with the rapid turnover of labour, for example, staying in the industry and not being fired and rehired. A lack of training time was also mentioned. In both ports and airports, there is particularly a deficit of training in safe working practices and the movement of workers around chokepoints. This inadequacy leads to the risk of vehicle accidents or the creation of dangerous situations where workers do not use safety cages or ropes when tying themselves to a container staple or when cleaning an aircraft. In general, the lack of training time and the situation of temporary contracts force workers to carry out tasks for which they are not trained and cause possible damage that they are not allowed to report for fear of disciplinary sanctions, as reported for Lisbon. The temporal struggle endangers workers and passengers, the dignity of passengers with special needs, and the whole industry itself.

In terms of the spatial dimension, there are more similarities between ports and airports. Maintenance of the working area is a common issue at both chokepoints in both countries. In the port sector, machinery such as cranes, winches, and cars are not maintained and can pose a risk to workers. In the airport sector, infrastructure in the workplace causes problems, such as open power cables and water pipes. In both industries, the issue of sleep and where it takes place was raised. Informants mentioned that because of the distance between work and home and the lack of time between shifts, workers would sleep in the hull of a ship or in the cabin of an aeroplane. This is more of a problem for Brazilian dockers in the port sector, as the flight attendants and pilots concerned have been able to challenge this situation. In the airport sector, however, it was reported from both countries that the distance between the workplace and home posed a challenge to workers' reproductive health in terms of having time for meals and breaks and access to functioning toilets.

Another aspect is the issue of cleaning and changing. In the case of ports, the main problem is that transsexual and female workers do not have a changing room for their gender. In the case of the airport sector, all workers have a problem with access to a changing room, which is particularly a problem in the Brazilian airport. There is also a lack of toilets and sanitary products for Brazilian airport workers, which can pose a risk to their health. Finally, I found the issue of where uniforms and work clothes are cleaned to be a significant spatial conflict. Especially when companies expect workers to wash their uniforms, this work takes up their reproductive space and time, pushing it out of the workplace and the realm of the production site.

The aim of this chapter was to show that precariousness and precarious exploitation patterns are not only based on low wages, but also on temporary contracts, overtime, lack of training, maintenance, and other aspects that con-

stantly threaten the integrity, health, and safety of workers. There are still differences in the labour division between the port and airport sectors, which seem to be converging.

As has already happened in the airport sector, the port is also breaking down the individual work steps. For example, the people who unload the containers are usually port workers. However, the expansion of the gig economy could mean that dock work could eventually be skipped. Loading and unloading could then be done by truck drivers and warehouse workers organised through gig platforms. The transport of containers from the port to trains or transhipment points will no longer be carried out by trained port workers, but by truck drivers, who will be subject to different tariffs and laws than port workers.

I touched briefly on the issue of heat waves and work, although it has become more of an issue in Portugal and Brazil. Workers do arduous work on ships and at airports in temperatures of over 40 degrees in the summer. The destruction of nature through capitalist extractivism also undermines its flesh and blood, or its very nature, for the production of surplus value. As rivers dry up, workers are more quickly exhausted in heat waves and have to fight for more breaks and drinking water, thus partly supporting an industry that drives the destruction of nature and climate change. The capitalist system and its socio-corporeal and spatial-corporeal organisation exist only on an essentially violent metabolic rift that threatens workers' working bodies with accidents, illness, and premature death. A materialist feminist theory centred on the body can help explain the nature of exploitation and its consequences in a specific time-space constellation.

8. The State and SRM at Chokepoints

The various moments of the primitive accumulation are now dispersed, more or less in chronological order, among Spain, Portugal, Holland, France, and England. … These methods are partly based on the most brutal violence, e.g., the colonial system. But all of them use state power, the concentrated and organised violence of society, in order to promote the process of transformation of the feudal into the capitalist mode of production and to speed up the stages of transition. Violence is the midwife of every old society that is pregnant with a new one. It is itself an economic force. (Marx [1867] 1957: 791; own translation [AE])

A society "pregnant" with a new society, and the violent role of the state in such processes of transformation, has been one of the central themes of recent Marxist debates. Discussing the transition of the Portuguese, Spanish, and Greek states to parliamentary democracy in the 1970s, Nicos Poulantzas provided a profound economic analysis of the Portuguese state as the organised "violence of society". There was a "high concentration of capital in the hands of a few families"; at the same time, foreign investment, especially from Britain and West Germany, increased in exchange for agricultural exports (Poulantzas 1976: 16-36). In Poulantzas' work The Crisis of Dictatorships (1976), the different political scales of state power and influence are indirectly and directly addressed when discussing the declining influence of US capital in the European periphery (Claar 2018: 13). According to Simone Claar (ibid. 31), Poulantzas outlined two perspectives for Portugal's post-revolutionary transition: either to become an "American colon[y]" or to be "integrated into the common market" of European capitalist states if the workers' movements failed to achieve national independence from "imperialism as a whole".

In her doctoral dissertation, Alke Jenss (2016: 59) argues that Poulantzas's analyses of the Portuguese, Spanish, and Greek states in their dictatorial period and transition to a democratic bourgeoisie show parallels to processes in South American states in the same period. Looking at the global entanglements of these three nations in the European capitalist periphery and the specific social characteristics of politics and the state, Poulantzas noted differences in the structures of production between the metropolitan countries on the one hand and the vast territories "dominated" by a few wealthy families on the other. Particularly after the Second World War, foreign investment flowed into the manufacturing industries of these countries. The Brazilian state, for example, failed to protect itself from "external shocks" from northern economies that affected these sectors (Schulze/Fischer 2019: 412). Such entanglement with foreign investment and capital from colonies, as in the case of Portugal, led to a delayed industrialisation process and a high dependence on the production of primary commodities for export. Thus, as noted in section 4.1, the Portuguese state entered shallow waters of interdependence with core countries similar to those of Brazil, which later economically overtook its colonial state of origin. In this way, the two entangled spaces of capital accumulation, logistical net-

works, legal regulations, labour regimes, and labour divisions entered a similar stage in the 1960s and 1970s.

The political structures in both states were similar: Conservative authoritarian military dictatorships with a strong focus on the repression of trade unions and social movements (Leubolt 2015: 66). While Portugal externalised its colonialist strategy of capital accumulation to the African continent, Brazil's extensive agrarian private lands internally maintained a labour regime in which forced informal labour remained an essential part of capital accumulation and thus an internal mode of access to cheap variable capital (Leubolt 2013: 71). As Claar (2018: 14) states, "Poulantzas emphasises that the capitalist state and struggle take place in the space of the national state, but the capitalist relations are not restricted to the nation-state". Power relations and social formations can be analysed at regional, national, and international levels. Workers and capitalist groups deal with all levels of class struggle in different ways.

As the previous chapters have shown, through the lens of critical logistics, capital must cross national borders. It relies on international infrastructures to access spatially and time-sensitive commodities and to segregate workers and their bodies along particular divisions of labour. In the 20th century, US capital dominated this process of internationalisation, "which Poulantzas defined as an 'imperialist social division of labour'" (Claar 2018: 14). Steve Rolf (2015: 140) suggests that on an international scale, state projects support the global capital accumulation strategies of particular (national) capitalist groups. However, in the competitive situation with other imperialist states, they are "forced to either accept or try to improve their position in an imperialist chain" (ibid.). On behalf of this imperialist chain, Brazil and Portugal have chosen different strategies to maintain their positions, rather than being able to improve them.

Both states changed in the mid-1970s (Portugal) and mid-1980s (Brazil), driven by uprisings of workers and social movement activists who inscribed their interests in the capitalist state apparatus. As in any capitalist state, authoritarian practices remain, especially in workplaces and logistical spaces such as bottlenecks. In Portugal in 2011 and Brazil in 2016, a new discourse emerged among trade unionists and social movement actors about growing authoritarianism and comparisons with the old dictatorial regimes. They observed an erosion of consent and democracy within the states. Based on these historical parallels drawn by trade unionists and social movement activists, I will analyse the role of the Portuguese and Brazilian states from the 1900s to 2020 in order to develop an understanding of both periods (dictatorship and democracy). This historically embedded relational comparison will be part of chapter nine.

This chapter aims to operationalise two questions that I will pursue empirically in the next chapter. Firstly, how does the state manage the temporal and spatial metabolic conflicts, and secondly, how does it channel and limit workers' resistance at chokepoints? With these questions in mind, I want to trace how organised violence is used as an economic force to keep transformative

struggles at bay and the core of the capitalist state, a class society based on capital accumulation and concentration, intact.

The national and transnational capitalist state apparatuses are indispensable for the development of (global) trade, logistical networks, warfare, and vice versa. As Heloise Weber (2007: 560) points out, states "naturalise a representation of the political structure that is itself deeply implicated in the reproduction of social and political power, and thus inequality." Conversely, political and economic structures can be "de-naturalised", disrupted, and dismantled through class struggles and social movements. Brazil and Portugal provide vivid examples of this.

I will begin this chapter by arguing for a materialist and relational approach to state theory in order to understand the role of the state in the neoliberal period of capitalism. I will then discuss the authoritarian and illiberal practices of the state and how they affect temporal and spatial conflicts in the Social Reproduction Metabolism. I will discuss the unruly nature of chokepoints and why protests in the form of blockades and strikes at these critical infrastructures are particularly exposed to state violence as authoritarian practices, again targeting the labouring body of resisting workers. Finally, I look at trade unions in their hybrid form as state apparatuses and social movement actors, and how they are un/unable to address conflicts in the Social Reproduction Metabolism of workers at chokepoints.

8.1 Materialist State Theory

To understand the specific role of the state, I will use a (neo-)Poulantzasian version of a materialist theory of the state.[90] In neoclassical approaches to the economy and the state, scholars have emphasised that in the period of neoliberalism, the role of the state has disappeared and (financial) capital has come to dominate the (de-)regulation of economic and social processes (see Brohman 1995: 126). According to Brohman's critique of neoclassical approaches, including the neoliberal framework, this idea of a "vanishing state" results from a reduced ontological perception of economic growth and development. This critique parallels what I argued in chapter two: Neoclassical ideas are based on an atomistic ontology in which objects such as "the economy" are analysed by distinguishing them from the surrounding "noise" (ibid. 123).

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90 This section, by its nature, remains superficial and does not claim to map the diverse discussions of Marxist-inspired theories of the state and different forms of power, or to provide a more comprehensive introduction to different approaches to Marxist state theory. For an overview, see Demirović (2007), Wöhl and Wissel (2008), Gallas et al. (2011); Gallas (2016b).

The advantage of Poulantzas' relational approach to the state is that it breaks down the barrier between the noise and the economy. He foregrounds structures and actors as active, transforming elements in the neoliberal period. The state does not disappear from the scene or become a neutral outside. Materialist and (neo-) Poulantzasian concepts of the state focus on how the state functions, revealing its often hidden role in maintaining the reproduction of capital accumulation and class domination. The asymmetrical social tensions and contradictions of social and economic relations are at the centre of such analyses (Jenss 2016: 44). The state is not perceived as an external or neutral field, nor as a black box. (Neo-)Poulantzasian theorists also refrain from an orthodox materialist conception of the state as a one-sided general "ideal capitalist" acting solely on behalf of big business, industry or the ruling classes.

In contrast, the state is understood as the expression of certain spatio-historically inscribed social and economic relations. As a result, it is perceived as marked by frictions and political and economic crises, and is constantly reconfigured to reflect current power constellations (Poulantzas 2014: 144). Although it remains a *capitalist* state, it is not simply an instrument of the capitalist class, but rather the crystallisation of particular class power relations and past struggles. Emerging out of class and social struggles, the state is a heterogeneous ensemble of apparatuses that, although dominated by capital accumulation, have institutionalised to varying degrees some demands of the hegemonic or subaltern classes.

The state is a "capitalist" state because its "core" or foundation is the separation between private property and the corporative form of production based on a regime of the division of labour and segregation of workers along with passport, gender, and skin colour. It is only relatively autonomous from the economic sphere, unless the "core" becomes a matter of contention. The state has relative political autonomy through the economy (Claar 2018: 14). In this functional autonomy, we find specific dynamics, laws, structures, norms and personnel with a particular inertia and persistence, retaining and preserving detailed knowledge and processes (Jenss 2016: 44). As these structures historically emerge from specific class struggles, actors, conjunctures and spaces, relative political autonomy as a concept is helpful in understanding the different ways in which states are governed. From parliamentary democracies to fascist regimes, the capitalist core remains intact while the political form changes. Such changes reflect attempts by all sides of the class struggle to gain influence. State structures are permeated by older class and racial power relations, especially in times of crisis, to extend or limit forms of oppression, exploitation, and democracy.

Since the class antagonism(s) due to capitalist forms of production are permanent, classes and fractions of classes are always in struggle. The state is a materialised framework in this struggle that mitigates, organises, and channels conflicts (Demirović 2007: 101). These "channels" are always contested and

changed more or less frequently. The capitalist state cannot and must not eliminate these antagonisms. While it structures the forms of struggle, it seeks to unite capitalist interests and to divide, integrate, and mute movements that challenge its political and economic core.

8.2 The Capitalist State and Authoritarian Neoliberalism

As Christoph Scherrer (2014: 348) has pointed out, neoliberalism is "the ideology of a revolution from above, intended to push back the claims of other social forces". In his "class-sensitive approach", he refers to the political conjuncture of the 1970s, when anti-colonial and "Third World" uprisings challenged global and especially US capital interests. Scherrer highlights the (legal) strength of the transport unions as a key factor against which a counter-revolution rose alongside a neo-liberal thought collective to assert the interests of the ruling classes from the Global North (ibid. 348).

While critical theorists like Poulantzas tend to pursue forms of methodological nationalism,[91] recent scholars have improved and advanced materialist state theory. They introduced the concept of a more open and porous understanding of state apparatuses and the role of the state during economic and global crises and struggles in the era of neoliberalism (Jessop 2019). The concept of Authoritarian Neoliberalism[92] focuses on the role of the capitalist state within this top-down revolution and the deepening of its coercive measures as consent-generating ideology crumbles. The approach moves away from the state as a closed "case", a classical state-market dichotomy with the absence or presence of one or the other (Bruff/Tansel 2018: 2; Bruff 2021: 3). On the contrary, the approach shows that despite the relative autonomy of the state and the market, under neoliberalism the state and its apparatuses play a more significant role in channelling and organising capital accumulation and resistance and opposition in economic crises (Tansel 2017: 2-3). This gradual change in their role comes in exchange for less political access for the working class and already marginalised groups to democratic participation and influence (Briken/Eick 2017: 55-56; Jenss 2020).

Authoritarian Neoliberalism highlights the contradictory processes in which state apparatuses operate. They oscillate between following neoliberal

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91 See, for instance, Nicos Poulantzas (2014) last chapter in "State, power, socialism", in which he distinguishes the failure of class struggles and revolutions from processes solely within the nation states and neglects the international dimension of class struggles. Still, I consider his reflections on internationalism and for instance the imperialist chain as attempts to break from this trap.

92 I consider the approach as a lens and not as a historical category, even though it appears in and refers to a certain period.

agendas such as privatisation and flexibilisation, and attempting to mitigate the downsides of such processes by re-regulating infrastructure, bailing out banks, or buying back transport. Large global corporations are challenging the consensual ideology of the free individual in neoliberalism from above. Precarious workers and social groups are challenging the neoliberal ideology from below. As a result, state apparatuses close down democratic arenas and bargaining agendas and subsequently increase social reproductive tensions for workers through austerity measures.

Neoliberalism is the demobilising, depoliticising, and de-democratising ideology behind a revolution from above. It increasingly disperses and disorganises the structures and demands of the working class and other social forces. Neoliberalism is, therefore, a practice that uses austerity to pursue the redistribution of capital and to disorganise the subaltern sections of society. Far from being just a tool for cutting state spending, austerity since the mid-1970s has involved the spread of precariousness through laws allowing casualisation, a decline in job security through the legality of temporary contracts, and the "re-organisation of the state as a less welfarist and more penal and coercive institution" (Seymour 2014: 3-4). As discussed in chapters six and seven, gendered and racialised precarious exploitation patterns disorganise workers and lead them to internalise capitalist competition by confronting them with a potential metabolic rift in their social reproduction. Precarity forces workers to focus solely on organising their existence. In short, austerity is an instrument used by neoliberal and crisis-prone states to extend the extraction of variable capital from workers and their labouring bodies.

I use Authoritarian Neoliberalism as a lens to explain trends in labour law changes and austerity measures and their impact on workers at the chokepoints in Brazil and Portugal. In what follows, I will use the term neoliberal practices to encompass the ideology and method of disorganising and weakening the working class for more profit. Authors studying Authoritarian Neoliberalism emphasise the specific role of the capitalist state in the metabolism of capital accumulation and the reproduction of labour (Bruff 2013). I want to highlight this role by focusing on the impact of neoliberal practices and their consequences for the working body.

8.3 Authoritarian Practices in a Democratic Context

Poulantzas' development of his materialist theory of the state in "State, Power, Socialism" (2014) deals in great detail with the relationship between the body, the division of labour, and the state. Like Federici (2014), he addresses the question of violence and violent historical processes. Violence is a central precondition for the exercise of power in (crystallised) relations of domination,

specifically as "violence to the body" (Poulantzas 2014: 29). Through organised physical violence by the state, the body is not only a biological entity or an extended machine part for the production of value, but becomes a political site of struggle (ibid.). As a result, he distinguishes between ideological and repressive state apparatuses (Claar 2018: 14). The gendered and racialised, economic and political determination of the human body by the labour process, workplace hierarchies, and the state ultimately affects labour struggles over health and safety.

At this high level of abstraction, however, it is impossible to grasp how the state, its laws, apparatuses, and personnel exert embodied violence on workers. It is therefore necessary to sharpen the theoretical tools and apply them to concrete examples.

As briefly mentioned in chapter seven on the Social Reproduction Metabolism as a game of tug-of-war, the capitalist state has a specific role in managing the extraction of variable capital from the labouring bodies of workers. In order to deepen my understanding of how this happens more concretely, in the following sections, I will return to the categories of temporal and spatial conflicts in the Social Reproduction Metabolism of labour. And I want to clarify what I mean when I write about authoritarianism and the authoritarian practices of the state, and why they cannot be directly equated with physical violence, but can lead in the long run to forms of mental and physical violence.

Starting with the latter, I found Marlies Glasius' (2018) text "What authoritarianism is … and what not" very convincing in its attempt to explain more concretely how authoritarian practices unfold in the context of parliamentary democracy. Against the backdrop of Donald Trump's successful election result, Glasius criticises the fact that a broad debate on authoritarian regimes has been launched that lacks a clear definition of authoritarianism. Jair Bolsonaro, Donald Trump, and other far-right presidents were democratically elected. This fact alone exposes the shortcomings of defining authoritarian practices in terms of fair and free elections with unrestricted competition (ibid. 519). By defining authoritarianism not as a marker but as a practice, she moves away from a static concept applicable only to the realm of the state (and its electoral processes). Instead, she suggests "to investigating the authoritarian practices of judicial, social policy or religious institutions" (ibid. 525) to gain a deeper understanding of the impact and application of authoritarianism.

To do this, it is important to define authoritarian practices. Glasius (2018: 528) suggests describing them as "sabotaging accountability". Accountability combines two different meanings, which can be seen in the two translations of the term into German. These are "Verantwortlichkeit" and "Rechenschaftspflicht", e.g., taking responsibility for a decision that affects a certain group of people, responding to criticism, and justifying decisions. More specifically, in the words of Glasius (ibid.):

According to a parsimonious and widely cited definition, 'accountability is a relationship between an actor and a forum, in which the actor has an obligation to explain and justify his or her conduct, the forum can pose questions and pass judgment, and the actor may face consequences'. Sabotaging accountability means that the person or group of people who took a decision on behalf of another group denies to answer to any form of criticism, deviates or neglects its responsibilities, or spreads misinformation about taken decisions and the effects they might have on the affected group.

Sabotage can take the form of spreading misinformation about the consequences of a decision, denying one's responsibility, or refusing to answer questions about it. It can also be exercised through physical control to silence the group affected by the decision, which cannot be reversed without the use of organised violence (Glasius 2018: 527).

The state provides the legal framework within which the extraction of surplus labour takes place. The capitalist classes cannot endlessly exploit workers or arbitrarily put their bodies at risk, as workers may be needed in other sectors, or in military operations to defend capital's interests outside or within the nation-state. The working bodies of the workers are vital to the existence of the capitalist economy and the state apparatus, although living conditions and wages may tell a different story. Yet, there are state apparatuses, laws, personnel, and sometimes even privatised agencies to check that the extraction of variable capital does not put the labouring body at risk (Briken/Eick 2017). What these risks are and how to avoid them remains a constant question of class struggle, often expressed in anti-austerity movements and specific industrial disputes.

In the previous chapter, I distinguished between temporal and spatial conflicts over the Social Reproduction Metabolism. The state plays a role in both conflicts. The temporal conflict, for example, was expressed as an ongoing struggle over the eight-hour working day. It shows that it has been possible, through political struggles, to reduce the peak of the competitive coercive dynamics in which capitalism exploits workers to their metabolic rift. Resistance to the commodification of labour power included a tendency to limit the commodification of health and safety (Brinkmann 2011: 146).

In the spatial conflict over the Social Reproduction Metabolism, the state not only regulates health and safety standards in the workplace. It also maintains the nuclear family with specific infrastructures such as crèches for (free) childcare, health care, care for the elderly, education, housing, sewage, electricity, internet, transport, and spatial planning, and forms and co-constitutes the household.[93] In addition, reproductive laws such as tax relief for married heterosexual couples with children, the right or prohibition of abortion, marriage laws, laws on sexuality, drug use, migration laws, and more regulate the limits and possibilities of labour reproduction (Ferguson 2016: 50). All of these

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93   Although, as Bernhard Leubolt (2015: 65) notes, the first social welfare infrastructures in Brazil were financed and built by the companies and employers themselves.

laws and infrastructures are the result of decades and centuries of social movements and class struggles, which have led to regionally different outcomes in terms of how the state supports working-class and pro-capitalist interests.

The workers' movements of the 19th and early 20th centuries made significant advances in the Russian, French, German, Chinese, and many other revolutions. Uprisings and general strikes challenged capitalism as a whole, but also won important health and safety measures. These included the 8-hour day, maternity leave, unemployment benefits, sick pay, social housing, and canteens. These demands limit the extraction of variable capital from the workers and are inscribed through struggle in the apparatuses of the capitalist state.[94]

The capitalist state, thus, mediates both spheres: the production and reproduction of labour power, addressing temporal and spatial conflicts. A change in the regulation of training requirements for the port or airport sector can increase the supply of cheap labour for companies. However, it also increases the risk of (fatal) accidents and, thus, the need to reproduce the labouring body through health care and often private and unpaid social care at home. In addition, austerity measures, such as cuts in childcare or public transport, can affect the time workers have for productive work.

Apart from the state, jobs and working conditions also change as a result of industrial change. Moreover, the state does not always directly mediate changes in the reproductive sphere. As the Covid-19 pandemic showed, the pandemic did have an impact on reproduction. Nevertheless, the changes in the sector and the outbreak of the global health crisis, the wider dynamics of capitalism as a whole, and the way in which capitalist states and governments are able to provide emergency care, or are inclined to regulate labour laws, influence the circumstances in the sphere of production and reproduction.

Through labour laws, the state defines the metabolic rift in workers' social reproduction and influences the temporal and spatial conflicts. When it pushes the tug of war further toward the employers, it supports neoliberal practices and a more rigid capital accumulation regime on the backs of the workers. The metabolic rift itself can be a possible outcome of such neoliberal practices. Authoritarian practices, as defined by Glasius above, come into play when workers seek to dismantle and challenge neoliberalism and austerity.

Authoritarian practices play out in two ways. First, state personnel sabotage accountability, or allow private CEOs to sabotage it, by failing to respond and react to workers' challenges. As a result, workers may protest or even go on strike and if they are working at chokepoints, they are challenging the econ-

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94   According to Wolfgang Hien (2018), in many states after the Second World War, trade unions and workforces condensed the idea that hard and unhealthy working conditions can be accepted in exchange for higher wages. In parallel with the collateral damage of war, it was understood that the labour process could also cause collateral damage to the bodies of workers. This went hand in hand with masculinist exploitation patterns on the one hand and low wages for women workers on the other.

omy. In this case, a second authoritarian practice can occur, often directly exercised by repressive state apparatuses such as the police or military forces. Striking is prohibited (legally or not) and workers experience illiberal practices in the form of physical violence or other strike-breaking measures.

Illiberal practices often conflate with authoritarian practices. However, they are not the same. Glasius (2018: 530) defines illiberal practices as "a pattern of actions, embedded in an organised context, infringing on the autonomy and dignity of the person." They can accompany authoritarianist practices but can also be guided by other aspects. Those can be ideologically driven harassment "or even to carry out the will of the majority" (ibid.).

8.4 The Unruly Nature of Chokepoints

The second form of authoritarian practice, the legal and physical repression of resistance, does not always occur in all strikes. In many cases, strikes are a response to the sabotage of accountability by CEOs, management, politicians, governments, etc. Sometimes workers win concessions, start a new strike, or are weakened by the economic, social, and political pressure that a less effective and robust strike could put on them. Not all sectors experience strike-breaking measures from the state, as not all sectors have the same impact on the national and even international economy when disrupted. Discontent can also be channelled through "social partnership" rituals, such as annual collective bargaining.

Critical logistics offers entry points into how infrastructures and chokepoints are embedded in the capitalist state. Infrastructures are intertwined with histories of transport, imperialism, and war (Hippler 2017). States or extra-state apparatuses govern the terrains on which infrastructure is built (Larkin 2013). Khalili (2018: 915) highlights that governments control the circulation of goods and people, and in this case can, for example, disrupt the movement of migrants across borders or the circulation of goods, create scarcity, and generally moderate the supply of goods.

In her study of the nexus between finance, infrastructure, colonialism, and nation-building in Canada, Cowen (2019) points to the role of railway construction in nation-building. This process included the killing of buffalo, the main food of Indigenous peoples, which led to their displacement from the land needed for railway infrastructure. All these intertwined processes allowed the railway to unite the various British and French colonies into an independent state project. It accumulated Black and Asian workers and their working bodies in the railway construction towns, which later became the backbone of the Canadian organised labour movement. The text illustrates how infrastructure is

the physical expression of what Nicos Poulantzas (2014: 37) calls the historical materialisation of power relations.

In Brazil and Portugal, I have also shown the central role of transport infrastructures and chokepoints, and how these chokepoints face different spatio-historical challenges and contribute to "making and maintaining the state". Even if spatial and temporal conflicts over the social reproduction of labour are subtracted, myriad problems threaten the seamless functioning of chokepoints. Starting with the pandemic in 2020, which has affected aviation, maritime transport and the port industry, the governance of a virus has not yet found a single international strategy. There are too many opportunities for competition between airlines, airports, ports, and shipping companies to create a single approach for all. Then there is the increasing threat of war, which has forced shipping and port companies to suspend services and, in the case of the Russian-Ukrainian war, led to a shortage of labour in the maritime sector. About 13.85 per cent of majors and officers come from these two states.[95] In addition, there are the escalating military conflicts in Palestine-Israel and the wider Middle East, which are having a major impact on the Red Sea passage and the Suez Canal: "The volume of cargo passing through the Suez Canal has fallen by 45 per cent" since the start of the war and Huthi militia attacks on cargo ships (Khalili 2024).

But there are other problems associated with the unruly nature of chokepoints. As noted in Chapter Four, chokepoints are areas where the circulation of goods and people slows down due to intermodal transport and a lack of alternative routes. However, especially in Brazil and Portugal, they are also the consequences of spatial-historical processes driven by capital accumulation. It tends to clash with the spatially memorised past of colonialism and the occupation of vast tracts of land that capitalism still finds difficult to digest and connect. Deregulation in the neoliberal period has even reduced the possibilities of connecting and managing chokepoints.

For example, the Portuguese port of Sines has to close seasonally during severe storms because its infrastructure is not yet sufficiently prepared for extreme weather conditions. Although Lisbon has gradually become a less economically critical port, it still has a better geographical location on the large Tejo Bay (P13 2017: item 72). However, Lisbon is less accessible than Sines because of the growing size of container ships. In addition, Sines is exposed to a more or less growing geostrategic conflict between the US and Chinese imperialism because it is a vantage point for the large fossil fuels and possible wind farms of the Portuguese part of the sea, as pointed out in section 4.1.3. Meanwhile, the port of Lisbon continues to suffer from congestion and, as was made clear in the last chapter, there is a lack of investment by companies and

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95 Seafarer supply, quinquennial, 2015 and 2021 (UNCDAT 2021), https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=157422 [Access: 12.10.2022].

state apparatuses in maintenance, infrastructure, tools, etc. Instead of renewing the old workplaces, which may not be considered necessary or efficient enough, new terminals are being built, allowing more capital to flow in.

In the Brazilian port of Santos, the long distances between terminals are not only a problem for workers' access to reproductive facilities, but also for the management of this vast space. The Santos port terminals now cover three different cities. They need to regulate the congested transport of goods and labour, drug trafficking, and human trafficking (B39 2018: item 12). In addition, as the Chatham House report (2017: 115) points out, there are growing dangers of flooding and storms that can bring South America's largest port to a standstill. In particular, workers on daily contracts are affected when the port cannot operate due to flooding, as in the time it takes for the regional government apparatus to clean and dry the hub (B50_1 2018: item 4). Moreover, in Santos, neoliberal deregulation and privatisation of infrastructure have led to a lack of maintenance of the road and rail networks around the chokepoint, which currently clashes with the interests of the Chinese logistical empire as it affects the entanglement between the large pork industry in China and the Brazilian soybean sector.

In the aviation sector, the increase in LFAs and investments (tourism in Portugal and Brazil, as well as the Olympic Games and the World Cup) has led to an increase in flights and traffic around airports. However, it is not possible to build more runways due to lack of space. This leads to delays and cancellations. The growing threat of climate change has also challenged the entire airport industry, as well as polluting transport in general.

While all these problems can lead to possible disruptions, it is in industrial disputes that the state sends in (military) police forces, and where a growing body of labour law indicates that at least this danger can be controlled. However, it seems that the nature of the workers may be as unruly as the chokepoints.

8.5 Authoritarian Scale Shifts and Up/Downscaling

In their relational comparative study of secondary ports in Colombia and Jordan, Alke Jenss and Benjamin Schuetze (2020: 88) highlight the role of scale shifting as an authoritarian practice, as it is another form of sabotaging accountability. Transferring "local decision processes into private hands" (ibid.) or upscaling them to transnational apparatuses such as the European Commission can put workers in a situation where local strikes alone may not be enough. They may decide to "upscale" their struggle as well in response to the authoritarian shift in scale. Although, as discussed in the case of the Bra-

zilian airline merger, scale shift can also destroy trade union structures and other forms of workplace organisation.

I use the concept of the "politics of scale" to capture the different levels at which the global transport industry and authoritarian shifts operate, and at which trade unions tend to operate either as state apparatuses or as social movements (Brenner 1999: 432). The concept brings together theoretical frameworks developed by scholars in the field of critical geography. Their studies seek to politicise the territorial and global reorganisation of capital.

… [D]uring periods of sustained economic crisis in "urban spaces and state institutions" to "create a new geographical scaffolding for a new wave of capitalist growth." (ibid. 432-434)

Processes of capital accumulation shape spaces and legal frameworks. Likewise, social movements, trade unions, and other activist networks that oppose the uneven and unequal spatially inscribed processes can also turn to specific scales and employ them as a vantage point for resistance (Brenner 2008: 76). At a particular stage of a struggle, the national scale of trade union activism can be perceived as too limited for framing and organising resistance. Internationalising trade union activity might widen and strengthen oppositional forces (Wissen 2009: 899), as the examples of the transnational Ryanair strikes and the "Reclaim Lashing" Campaign show.

Following this claim, I use the national and transnational political scale to analyse changes in the legal and political frameworks for workers at the chokepoints and how they have used these scales to fight back. In struggles, activists have either scaled up their demands and broadened the scope of their struggles, for example, by targeting not only the national aviation industry but also international institutions such as the EU, ICAO, and IATA, or transnational corporations such as Ryanair. Or they have not only organised strikes at their own chokepoints, but have been able to link their struggle through international trade unions with other chokepoints that have organised solidarity strikes. In this way, workers have broadened the terrain and improved their conditions of struggle within existing (international) structures.

Equally, I have observed the dynamics of down-scaling struggles. As much as workers in many sectors point to collective dimensions such as wages, collective agreements, and union structures, in the transport sector activists also politicise the scale of their bodies (Engelhardt 2020b). Either they use their bodies to mark and highlight different examples of how the industry is changing, or they use it as the lowest level of resistance by refusing certain tasks, gestures, or clothing. They have used it to highlight the impact of austerity measures and labour reforms, to resist police repression physically and by refusing to work.

As workers and activists scaled up and down their political and legal terrain to deal with the economic crises in the sector, they became involved in various struggles, particularly to highlight the importance of health and safety at work and the integrity of their working bodies.

Neoliberal processes, the three forms of authoritarian practices, and illiberal practices are used here as a way of operationalising the role of the state in regulating the social reproduction of workers at chokepoints.

Neoliberal practices increase temporal and spatial conflicts in the workplace and lead to the flexibilisation of work, with less security in terms of contracts, shifts, and access to reproductive facilities. Casualisation allows companies to outsource part of the workforce, with the risk of a lack of training time and knowledge of the dangers at the chokepoints. As described above, austerity is a method of redistributing social wealth into private hands, forcing workers into precarious jobs, and cutting free access to social reproduction in order to open the door to the commodification of social services. Public and private companies seek to integrate and pacify trade union structures or eliminate them through union busting and other forms of harassment. From the perspective of struggle, privatisation is a form of authoritarian scaling to disorganise workers into new structures and deny access to the bodies responsible for a particular change or problem.

Authoritarian practices (I), translated as sabotage of accountability, can be found in denying discussion, spreading misinformation, or ignoring collective decisions. When workers respond to such sabotage, especially in critical infrastructure, their strikes, protests, and sometimes even self-organisation are also sabotaged, which is referred to as authoritarian practices (II). In response to a significant strike, companies and state apparatuses may resort to scale shifts to evade their responsibilities and further open struggles, here categorised as authoritarian practices (III).

Illiberal practices can accompany all these authoritarian practices. Accepting an increase in potentially fatal accidents is a passive but still violent form of illiberal practice. The violent repression of strikes by sending in security forces can lead to physical and psychological damage to the body and integrity of workers. The shift in scale can also be accompanied by corruption, as companies are privatised with only one bidder in the "competition", or CEOs are relatives and friends of politicians who decide on the privatisation processes.

8.6 Trade Unions, State, and Class Struggles

When discussing Authoritarian Neoliberalism, it seems as if the authoritarian neoliberal state as a "shell" of this system of late capital accumulation is unbroken and more robust than before (Jessop 2019: 361). This impression comes against a backdrop of declining democratic structures, declining labour protection, and strike laws, increasing state repression, and precarious workers struggling to make a living without the time and space to organise. However, as Bruff (2014: 115) points out, modes of governance are also weakening

against a background of diminishing hegemonic consent. Or, as Harvey (1998: 407) puts it, although "the instability is disconcerting, sometimes destructive, and always difficult to cope with, it provides multiple opportunities for subversion and opposition on the part of the laborers."

Trade unions defending workers' interests in companies and sectors do not operate outside national and transnational state structures. Social and workplace struggles, especially at highly sensitive nodes in the global value chain, are heavily influenced by regulations, especially by transport ministries, different labour laws, and more, precisely because they can have a sensitive impact on national and international production and distribution.

State apparatuses are not homogeneous, but are like cogwheels that, in conflicts, partly turn with or against the interests of subalterns or hegemonic forces, but also pursue their own goals such as more influence, more personnel, more wages, etc. (Poulantzas 2014: 242). Domestic and political conflicts depend on the depth of the economic crises and the dynamics of social movements and labour struggles.

Trade unions can also be understood as potential state apparatuses, especially where social partnership integration is successful (Esser 1981: 366-368). Poulantzas (2014: 155) notes:

… [T]he struggles of the popular masses constantly call into question the unity of the state personnel as a category in the service of existing power and hegemonic fraction of the dominant classes…

This statement can also be applied to trade unions and their hybrid role as both state apparatus and social movement. Both sides are constantly challenged by struggles within and with trade union structures.

In order to facilitate or obscure the crumbling ideological consensus, the system integrated former left and working-class representatives into its structures through government careers or by co-opting them into management and shareholder committees (Scherrer 2014: 350). This trend deepened after the collapse of the Soviet Union and the Eastern Bloc, which led to an ideological retrenchment in the labour movements in terms of openly discussing and pursuing anti-capitalist demands and strategies.[96] While this trend has led to a divergence between political programme and actual parliamentary and government policy, it has also accelerated the decline of formerly large progressive parties and a widespread distrust among workers of party politics as a whole (Seymour 2014: 21).

This process has also left its mark on the trade unions, which have largely been involved in social-democratic and communist party politics. Brazil and Portugal are discussed in light of this trend, as it also has implications for or-

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96   This does not mean, that I see the Eastern Bloc as an ultimate alternative to the rising neoliberalism of that time, however, it was an ideological reference point to think beyond capitalism which has vanished since the 1990s.

ganising against precarious work at the chokepoints. Richard Seymour (2014: 22) highlights a shift in trade union grassroots activism towards a "growing bureaucracy". This shift is reflected in declining membership and union density in workplaces, and the shrinking of self-organised union structures such as shop steward networks and works councils in workplaces (ibid.). While the numbers and changing structures are a symptom of a changing trade union landscape at the height of Authoritarian Neoliberalism, the effects are defensive tactics, a lack of democratic discussion with members and low participation in strikes and workplace assemblies. This, again, as has been pointed out, is also the result of a precarious and in many ways feminised exploitation pattern. Workers have to decide whether or not they can afford childcare to attend a union meeting, as there is no extra funding for such activities. The sword of precariousness also indirectly undermines union democracy and a vibrant membership capable of challenging a bureaucratised and politically empty leadership.

Accordingly, unions are neither homogeneous nor static blocs, but act from their position in the current conjuncture. They may be more inclined to form alliances with movements because of a particular political history and programme or because of political crises in the state, e.g., they may be open to the mobilisation of social power (Moore/Engelhardt 2019).

Particularly in recent years, as neoliberal policies and austerity measures have increased as a result of the economic crisis in Southern Europe and South America, trade unions have in some cases either been strengthened in their role as actors in the social partnership or have been pushed out of all forums for negotiating with employers and the government. These different developments are linked to the fact that the rise of Authoritarian Neoliberalism in many states not only means an increase in repressive measures (changes to the right to strike and demonstrate, increasingly repressive policing, privatisation) but also expresses a weakening of the state (Bruff 2014: 124).

At the same time, the privatisation of public enterprises also means the outsourcing of state personnel to the private sector, which also weakens trade unions and their "associative power", while at the same time enabling new strategies. Authoritarian Neoliberalism is thus an expression of the weakening of the political capacity of the state apparatus itself, which always leads to new crises. Nevertheless, it can be used by trade unions and social movements to push through social improvements.

Under neoliberalism, various state apparatuses are used by corporations to extend their capital accumulation strategies into new areas, leading to the reconfiguration of previously hard-won gains such as the right to strike, fixed working hours, permanent contracts, but also welfare state measures, such as free health care and education (Oberndorfer 2016). Institutional arrangements are being eroded, and trade unions are therefore forced to resist these restruc-

turings and challenge power relations from which they themselves are often excluded.

8.7 Concluding Remarks on the State

On a global imperialist scale, Portugal and Brazil were "latecomers" in establishing a powerful position in the imperialist chain. As Varela and Demier (2015: 424) summarise this development for Portugal, this also applies to Brazil in this initial period of capitalist state-building:

… [T]hose states, subjected to latecomer modernisations, tended to revert into dictatorships in the light of the fear caused by the threat (real or potential) of the proletariat, which was growing fast. In mass societies, whereupon the proletariat is already an independent political power, the bourgeois-democratic regime crisis (or even the impossibility of building it) might, at a certain stage of the class struggle, bring along the development of non-hegemonic types of political dominance, which, resorting to coercion rather than consensus, surface as a temporary and exceptional solution for the hegemonic failure affecting the ruling classes themselves. In such instances of deeper class struggle and "hegemony crisis", the bourgeoisie tends to break away from liberal democracy, establishing open types of dictatorship that provide it with the means to uphold social control.

In Portugal and ten years later in Brazil, social movements and labour struggles transformed those dictatorships into parliamentary democracies. However, authoritarian practices survived in those new political forms as they support the economic, e.g., neoliberal character of the global and specific local state apparatuses in different ways. The neoliberal deregulation of labour laws meant an advantage for the ruling classes in the tug-of-war game over Social Reproduction Metabolism. At the same time, the deregulation of labour affected the very physical integrity of workers and violated human rights on different levels, as demonstrated in chapters seven and nine.

Marlies Glasius (2018) refers to such violations as illiberal practices, distinguishing them from authoritarian practices. Such a distinction helps to understand the relative political and legal autonomy of the state over the economic processes of capital accumulation. It is important to know why and how workers at chokepoints are confronted with and embody neoliberal economic processes, while their struggle is deeply political. They encounter the authoritarian practices of the state and corporations in times of neoliberalism, which is to sabotage and silence accountability for how the apparatuses govern the Social Reproduction Metabolism of labour, preventing or pushing for a metabolic rift. Since chokepoints have a historically and spatially grown unruly nature, states need to put a special political and economic emphasis on policing such spaces and ensuring a seamless flow of goods and people. Since the suppression of strikes may be ineffective or may even increase social unrest, cor-

porations and state apparatuses also use shifts in accountability as an authoritarian practice to effectively sabotage access to democratic procedures.

To show the specific role of the state in regulating the metabolism of labour reproduction at chokepoints, in the following chapter I will look at different labour laws in Brazil and Portugal. These laws directly affect working conditions at chokepoints or change existing democratic rights, such as the right to strike or to form an (independent) trade union. To underline the idea that state apparatuses are a crystallisation of past class struggles, in the next chapter, I will go back to the period in which these laws were developed to better perceive the Brazilian and Portuguese backgrounds. Both legal structures were not only challenged by workers at chokepoints, but also limited or channelled their forms of struggle.

While health and education in these times are challenged by austerity measures, at least at the lower end of the bureaucratic structures in hospitals, schools, and kindergartens, the army, police, finance, and business in many capitalist states worldwide have increased their budgets. Since the economic crisis of the 1970s, the capitalist state apparatuses have increasingly struggled to unite the interests of capital and to disperse the organised dominant classes and subaltern groups. States have been challenged by the instability of global accumulation strategies and the increasing spatial entanglement of capital beyond the nation-state and across different geopolitical spaces (Jessop 2019: 350). As a result, the scope for negotiating conflicts between and within classes is diminishing. "Political features that were previously exceptional and temporary are being normalised" (ibid.). The "state of emergency" and authoritarian practices of forms I, II, and III are becoming a permanent aspect of the capitalist state. However, as I would argue, over the past 40 years this has had varying degrees of impact and has been dealt with by state apparatuses in different ways. The processes in Brazil and Portugal are prominent examples of this, which I will discuss in more detail in the next chapter.

9. Chokepoints in Authoritarian (and) Neoliberal States

Repression tried to advance
With firmness, we said no
If any of you enter the hangar
We'll blast the aeroplane.[97]
(Ramos 2003)

These verses are part of a poem about a strike at Lisbon airport on 12 July 1973, nine months before the Portuguese Revolution. The strike marked the beginning of the trade union movement in Portugal, independent of the state apparatus, with the creation of "Intersindical". It also marked the beginning of the end of the Portuguese colonial empire and authoritarian military dictatorship through a transition to parliamentary democracy, albeit within the framework of capitalism on the eve of its neoliberal phase. The poem deals with a conflict between Lisbon metal workers, TAP aircraft mechanics, the police, and the authoritarian state. The workers occupied the airport when a planned independent union meeting of more than 5,000 workers was banned (P21_3 2017: items 14-16). The occupation was followed by violent clashes with riot police, with many workers and police injured (ibid. item 16). However, the independent trade union movement gained momentum after winning a series of concessions (P18_1 2017: item 6). These were made possible by the occupation of Lisbon airport, a critical chokepoint of the Portuguese state. This is an example of how struggles at chokepoints played a crucial political and economic role in challenging the current legal and political structures of a state, which will be discussed in more detail in section 9.3.5.

In the previous chapter, I argued that authoritarian practices survived in democratic parliamentarism as a feature of the core capitalist state. I would add that authoritarianism has not only survived authoritarian regimes, but has also co-constituted capital accumulation in the current period of Authoritarian Neoliberalism since the economic crisis of 2007/08. Here, especially semi-peripheral or peripheral states like Portugal and later Brazil became laboratories for different economic groups and interests to use crises to roll back democratic rights and increase the physical and violent exploitation of workers.

As indicated above, I will begin with the historical background of the authoritarian period of the Brazilian and Portuguese states between 1900 and the 1970s/1980s, whose developments at times fell into "classical" authoritarianism in terms of electoral aspects and the suppression of freedom of speech and the right to organise in independent trade unions and parties. I

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97   The original text was written for a 30-year commemoration of the event by Celso Ramos, a TAP aeronautical engineer who was present at the incident. He sadly died in July 2022, almost 50 years after the event. The Portuguese version of the poem is attached in Appendix 2.

want to give examples of how labour struggles at chokepoints in Brazil and Portugal challenged authoritarian regimes and played a role in the struggle for democratic parliamentarism, albeit accompanied by specific rules on the right to strike in ports and airports in both states.

I will add certain neoliberal practices, such as new labour laws, that have flexibilised, tercerised, and disorganised labour at chokepoints, or have sought to do so. I will highlight specific labour laws and legislation and how they have modified the temporal and spatial conflicts already mentioned in the previous chapters. In a second analytical step on the role of the state at chokepoints, I will look at how the state in both Brazil and Portugal has responded to particular conflicts and grievances with (neoliberal) changes in labour laws and what forms of authoritarian practices (I) there are. The chapter also looks at strikes and how the banning of strike activity, repression by the police or military, or even the threat of imprisonment for workers who took part in a strike were authoritarian practices (II) and, in some cases openly illiberal. I will also consider the authoritarian practice of scale shifting (III) and how this has channelled temporal and spatial metabolic conflicts and shaped the ground for struggles at chokepoints.

In this chapter, I will look at specific laws and regulations that were relevant because of the crystallisation of labour struggles and the opening of a new arena or new channels for further conflict.

9.1 Remnants and Novelties of Authoritarian Practices

The labour laws of Brazil and Portugal still bear the imprint of the authoritarian dictatorships and associated thought collectives that developed after the First World War, accelerated by the global economic shock of 1929. Authoritarian corporatism between the mid-1920s/1930s and the mid-1970s/1980s, as in the two versions of the Estado Novo in Portugal and Brazil, was the response to two major threats to the core of the capitalist states. On the one hand, after the First World War, US imperialism emerged as the new global hegemon, increasingly influencing markets, politics, infrastructure, and culture around the world. At the same time, British and French imperialism still held important land and infrastructure in Brazil, while US imperialism invested in the Brazilian mining sector (Putnam 1941: 103). The second threat to the capitalist states came from the trade union and labour movements, inspired by radical mass uprisings such as those in Russia, Germany, and Spain in and between the First and Second World Wars.

In Brazil and Portugal, the period between 1918 and 1939 was marked by economic, political, social, environmental, and territorial crises.[98] Authoritarian corporatism, heavily influenced by Mussolini's fascist regime and social Catholicism in Italy, became the driving ideology for bourgeois, petty-bourgeois, and clerical forces to resolve these multiple crises (Pasetti 2017: 68). Fascist ideas had a solid transnational intellectual base among groups in states that were in the process of becoming imperialist nations or finding their place in the "imperialist chain". They emerged among right-wing anti-Semitic middle- and upper-class organisations, and reactionary Catholic and Jesuit currents, which at their core still upheld colonialist narratives of a Lusophone world order (Pinto 2019: 111).[99]

In both states, the ruling apparatuses, entrenched by military professionals, sought to regulate labour in a corporatist manner, influenced by an idealistic gilded structure, an idea closely associated with the Catholic Church. The clergy promoted a reactionary patriarchal ideology and the oppression of women workers, a rigid gendered and racialised division of labour and, in some parts, a racist (post-)colonial ideology. Moreover, the legal framework of the labour law was copied and pasted from the Italian Labour Charter (Carta del Lavoro of 1927), which became the blueprint for labour laws in many other fascist and authoritarian regimes around the world (Pasetti 2017: 80). Many of its original formulations on the "prohibition of class struggle" through "social peace" via "solidarity between capital and labour" found their way into the Portuguese "Estatutos de Trabalho" of 1933 (Decreto-lei nº 23.048) and the Brazilian "Consolidação das Leis do Trabalho – CLT" ten years later (Decreto-lei nº 5.452/1943).

On the one hand, labour laws positively regulated the limits of the exploitation of workers' bodies by limiting the normal working day to eight hours. They imposed a weekly holiday and, as in the case of Catholic Portugal and Brazil, emphasised the need to rest on Sunday. They also introduced limits and extra pay for night shifts, special maternity protection, and a ban on child labour. On the other hand, these laws became the legal basis for banning political strikes, whistleblowing, and free association in independent trade unions. Remnants of these laws have found their way into current labour legislation in both states. They can be seen as the crystallised (authoritarian) practices of state apparatuses set up to regulate class struggles that survived the various dictatorships. These remnants are being reactivated and re-used in times of new severe multiple state crises, such as the current conjuncture, where financial,

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98 In Brazil, agriculture suffered from severe droughts in the 1920s, probably due to the construction of large infrastructure projects that required wells and rivers to be dried up or diverted.

99 However, the imaginary included different imperial centres in either Portugal or Brazil, depending on where these groups were based (Pasetti 2017: 80).

economic, social, ecological, geo-strategic, and political conflicts are mutually accelerating.

However, as I will show below, these labour laws developed in the authoritarian period included more labour rights and restrictions on the extraction of variable capital than the neoliberal labour reforms between 2012 and 2019 in both states. In the authoritarian period, these rights were not easily accessible because the states denied workers the means to demand accountability. In the current period, where workers sometimes have more rights to organise, speak out, or strike, the legal framework to protect their Social Reproduction Metabolism is much more undermined. While authoritarian state regimes obstructed workers' independent organisation and strike action, the authoritarian neoliberal practices of the current state period seem to challenge both social reproduction and, in some ways, democratic rights.

While corporatist authoritarian states relied selectively on labour organisations to stabilise their economic space, the neoliberal state disintegrated organised labour movements. The authoritarian state openly used illiberal practices to break the resistance of workers and oppositional forces. In the neoliberal phases of the state, illiberal practices are, in many ways, a consequence of the dismantling of the limits of labour exploitation. But in some aspects, they are also a way of sabotaging accountability in overtly violent ways, through physical police attacks on picket lines and demonstrations.

In Authoritarian Neoliberalism, violence has occurred since the recent conjuncture of the economic crisis of 2007/08. The veil of freedom, equality, flexibility, etc., has been torn, revealing more openly brutal attempts to keep labour struggles at bay that are more closely linked to illiberal practices. The states of Brazil and Portugal have also seen challenging protests and strikes since the 2000s, which, while not as destabilising as in the 1960s, 1970s, and 1980s, have already shaken the capitalist core of these (semi-)peripheral states.

9.2 The Estado Novo in Brazil and Portugal

The first republic was established in Brazil in 1889, after the abolition of slavery and the monarchy. The Brazilian constitution was inspired by the US constitution and its federalist structure. The Brazilian state united 20 states, which were unequally endowed in terms of economic dependence and population. Due to the extractive colonialist nature of capitalism in Brazil, most of the population is still concentrated in the urban (port) centres along the east coast, especially in the regions of São Paulo and Rio de Janeiro. Commercial capital is also concentrated in these urban and political centres. At the same time, the vast forest areas in the west and north of the country were far less populated and dominated by a large agricultural and smaller mining economy.

Until the economic crisis of 1929, the coffee merchants were the driving capitalist force of the pre-war and inter-war periods.

The major coffee port city of Santos was known as "Red Barcelona", with the influence of anti-slavery movements increasingly permeated by European socialist and anarchist ideas carried by the large migrant movements from southern Europe, mainly Italy, Spain, and Portugal (B45 2018: item 6). Not only the port workers but also the railway workers on the infrastructures surrounding the port and connecting it to São Paulo were a very militant workforce (Grandi 2014: 164). The port city became the cradle of Brazilian trade unionism in a city that would be the epicentre of a historic struggle to unify the territory of the Brazilian capitalist state.

In 1932, the coffee port of Santos was the battleground of the so-called Constitutional Revolution, Brazil's civil war. Due to the coffee boom, the federal state of São Paulo was the engine of the staggering Brazilian economy, which had experienced a period of conflict due to the global economic crisis of 1929 and the years after (Teixeira 2018: 615). Due to the various institutional and constitutional changes and tensions, a group of coffee owners, industrialists, and middle-class strata sought to fight for the independence of São Paulo from the Brazilian federation in order to solve the growing economic crisis for the region. In the São Paulo struggle, the port of Santos became a naval chokepoint and was targeted by a sea blockade by the Brazilian navy. In an attempt to end this blockade, the rebel "Paulista" government used three aircraft purchased from the United States to attack the blockading ships and end the critical embargo (Fausto/Fausto 2014: 200-201). The federal government also used planes to ultimately defeat the Paulista uprising. At the same time, the black dockers' movement and the arriving European workers found common ground and organised joint and influential unions with significant control over working conditions and employment. The dockers became active in social, political, and legal struggles, crystallising their class interests into legal structures. The dockers' workforce was international, and so was their struggle. During the Franco regime in Spain, dockers in Santos refused to allow Spanish merchant ships to dock in the port (B47 2018: item 32).

Meanwhile, in response to the aftermath of the 1929 economic crisis, the Vargas government constructed the Estado Novo based on small entrepreneurs and more prominent foreign and national capital owners. Vargas worked with ideological co-thinkers such as Oliveira Vianna, who was influential in the Brazilian Labour Charter (Teixeira 2018: 614).[100] The period was marked by economic and political instability and the lack of sustained working-class resistance to an increasingly military and authoritarian statism. Right-wing military terror accompanied the Vargas regime against left-wing intellectuals,

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[100] For a more detailed discussion of labour reform and the different institutions at the time, see Oliveira (2018).

workers' organisations, and bourgeois dissidents who sought to break with the other Brazilian states to gain greater political and economic autonomy.

Vargas' corporatist version of the state lasted from 1937 to 1945. Brazil's Estado Novo differed from other fascist or authoritarian regimes of the time, such as Portugal. For example, Vargas abandoned a protectionist economic programme and instead tied the Brazilian economy more closely to US foreign investment. In this way, the authoritarian regime, which suppressed any working-class opposition, such as independent parties or trade unions, was financed not only by internal but also by foreign capital owners (Putnam 1941: 115).

The Brazilian Estado Novo also differed from the Italian and German fascist regimes in its "inability to develop genuine mass movements" (Poulantzas 1976: 56). This characteristic was similar to the Portuguese "New State" of the same period. Both authoritarian dictatorships in Brazil and in Portugal, remained

… [I]solated from the popular masses, and above all from the working class, never managing to implant themselves in it all seriously. In such a context, the policy of concessions to the working class makes up for this deficiency of the dictatorships, as far as the domestic bourgeoisie is concerned. (Poulantzas 1976: 56)

In 1945, the Vargas government was overthrown by workers, but also by sections of the owners of capital who preferred less authoritarian state intervention in the economy. The solid Brazilian Communist Party was heavily influenced by Stalinist concepts such as the "theory of stages", the core of which was the idea of overthrowing an authoritarian dictatorship in collaboration with the "more progressive sections" of the "national bourgeoisie" as a decisive "stage" towards socialism (Teixeira Da Silva 2019: 1). As Teixeira Da Silva (ibid.) points out, after the overthrow of the Vargas regime, the class alliance led by the Brazilian Communist Party entered into an "apolitical pact that, in the end, would supposedly reveal the fragility of an unrealistic strategy of alliances, when it was in the bourgeoisie's interests to prevent any 'populist agreements.'"

Still, the civil-military coup against Vargas paved the way for workers to seek accountability in company and state decisions and push for improving workers' conditions and workers' democracy. Although the labour courts were established during the Vargas regime to circumvent workers' demands and struggles, they were now utilised by workers and their organisations as a canal to negotiate the class struggle crystallised in the new political formation of the Brazilian state (ibid.). Since this period strengthened the workers' movements, the beginning of the 1960s saw an upswing in strikes and social activism. In response, the "more progressive oriented government of João Goulart proposed "grassroots reforms" (reformas de base), which included land reforms and some social concessions to the poorest in society (Leubolt 2015: 66).

9.2.1 Initial Dockworkers' and Aviation Workers' Unionism in Brazil

The Vargas government dictated the labour law and how trade union structures were to be formed based on unions, federations, and confederations (Giannotti 1995: 49). The Santos dockers formed their first union in 1919. It was closed down in 1926 following a police raid and reopened four years later in 1930 as the Centro dos Estivadores de Santos (CES) in the context of revolutionary uprisings in the city (Diéguez 2016: 105-106). Just one year later, the national government passed the first trade union law, allowing workers in other sectors to organise (ibid. 106).

The strength of the organised dockers in Santos was partly expressed in their use of the labour courts against Companhia Docas de Santos. As early as the Estado Novo period, dockers were taking cases to the Labour Court. In 1942, for example, they won a little less than 50 per cent of the cases, which was an immense gain given the political structure of the regime (Teixeira Da Silva 2019: 33). A key success was the right to a "closed shop" meaning that the unions became the only institution with the right to hire and train new workers (Diéguez 2016: 107).

In the twelve years between the first and second military dictatorships, dockers, drivers, and other workers in Santos used the labour courts for constant demands, organising strikes, and pressuring either the company and/or the court to rule in their favour (Teixeira Da Silva 2019: 106). In 1963, the year before the military dictatorship, workers in São Paulo and Santos filed more than half of all labour disputes in the country and organised most of the strikes (ibid.). Among the improvements were many regulations dealing with the temporal and spatial conflicts of workers' Social Reproduction Metabolism. These included extra pay for unhealthy working conditions, extra pay for dangerous working conditions and the payment of weekly rest periods (Diéguez 2016: 109). It also included rotation in shifts, terminals, and foreman positions, so that all workers could move equally between lower-paid and less dangerous terminals and positions, and higher-paid and more risky jobs (ibid.).

While the dockers' unions were established during the transformation of the port from a Black to a capitalist, industrialised, and international trading port, the aviation workers formed their unions mainly during the Vargas regime and the Second World War as clandestine organisations without any explicit knowledge of syndicalism (Giannotti 1995: 20). The first union of airport workers was the Associação dos Professional dos Aeronautas, founded in January 1942 in Rio de Janeiro by airport workers at Santos Dumont. A few days later, pilots and flight attendants followed their example, organising clandestinely despite the ban on independent unions. Flight mechanics at the Cruzeiro do Sul airline organised the first strike in Brazilian civil aviation in November 1945 (ibid. 21). They demanded and won higher wages. By this time, Rio de Janeiro was the state capital, with politicians and businessmen increasingly

flying in and out of the city. Because of the importance of the airport as a political chokepoint, strikes in this sector became very influential.

After the Second World War and the end of the Estado Novo, the aviation sector grew in the 1950s and 1960s, when the position of the U.S. influence in its regional aviation infrastructures (Paludi 2017: 13). While private companies such as VARIG continued to purchase aircraft from the US, the Brazilian government began to create the state-owned aeronautics company Embraer to gain independence from US aircraft supplies. Air travel increased, but the airports that were being built, mostly along the coast, had little in the way of safety technology to ensure safe landings. Economic pressures led to an increase in night flights, which increased the number of fatal accidents. The National Association of Airport Workers, founded in 1946, therefore demanded, in addition to the standardisation of wages, the safety of night flights and the equipping of airports with the necessary technology (Giannotti 1995: 22; 44). In this way, they fought a spatial conflict against the rift in the workers' Social Reproduction Metabolism. By developing and improving the spaces in which they worked and landed, they ensured their survival in the aeronautical workplace.

At the end of the 1940s, the historical parallels between the Estado Novos in Portugal and Brazil ended with the overthrow of the Vargas government, followed by various struggles and attempts at democratic elections (Teixeira Da Silva 2019: 1). Although the authoritarian state had introduced a labour code that limited the exploitation of workers to a certain extent, during the dictatorship workers were often denied the right to claim these limits. In the democratic period, however, they began to use the Vargas-era labour courts to improve working conditions and wages (ibid. 4). In 1964, however, another authoritarian coup, followed by a right-wing military dictatorship, attacked the re-emerging Brazilian labour movement and attempted to dismantle the labour courts.

9.2.2 The Estado Novo in Portugal

The modern Portuguese state was born during the Social Revolution and has been in a constant state of flux ever since. Under 48 years of right-wing dictatorship, the country's economy depended on the continued exploitation of its colonies, and by the end of the 1960s its belated industrial development had resulted in an export-led economy; annual per capita income rose by 6.5 per cent annually (Küpeli 2013: 13).

Following growing weariness and resistance to the colonial wars and an increase in strikes among the emerging industrial workforce, the Portuguese Revolution of 1974 brought social, economic, and cultural contradictions to the fore (Sperling 2014). However, the number of strikes during the dictator-

ship was meagre: between 1871 and 1920, some 4,636 strikes were registered, while between 1932 and 1969, hardly any strikes could be recorded (Costa/Dias 2016: 148). The strong co-optation of workers' councils in the "Estado Novo" shows how the unions, as state apparatuses, were cut off from the struggles of the working class in the cities and large agricultural areas and integrated into the authoritarian state apparatuses. Strikes were declared a "criminal offence" (ibid.).[101]

In Portugal, the first republic was founded more than twenty years after the Brazilian state implemented its first republican constitution. Between the abolition of the monarchy in 1910 and the establishment of Salazar's Estado Novo in 1932, 45 governments were elected and dissolved, some of which lasted only a few weeks (Lopes et al. 2007: 40). The First World War, in which 30,000 Portuguese soldiers participated, and the Great Depression of 1929 left their mark on the Portuguese economy (ibid.).

As early as 1926, the right-wing coup d'état was an expression of the deep crises of the Portuguese First Republic, in which neither the working class could overthrow the capitalist economic and political order, nor the capitalist factions could silence and break these movements. At the same time, economic development was slowed down by the prolonged crisis. As late as the 1940s, the British engineer Dennis P. Bertlin (1949: 4) reports: "Rail access to the port is complicated owing to the configuration of Lisbon and the surrounding countryside, and there is no direct railway to the main station from the docks."

In this unstable situation, in which similarly to the Brazilian state neither the strong workers' movements nor the capitalist interests were able to take full control of society, the government, in which Salazar was finance minister, installed an authoritarian regime. It aimed to maintain control and a balance between class interests in a context of crisis and struggle, in order to maintain a low level of economic and infrastructural development.

Poulantzas (1976: 92) wrote of the authoritarian state as a form of emergency that "corresponds to a significant shift in the balances of forces". There are particular changes for the "exceptional" state, such as "the suppression of the traditional political representatives (political parties) of the fractions of the power bloc itself" (ibid.). The Portuguese organised labour movement was fully integrated into the state, trade unions became state apparatuses in which workers were forced to participate. The Spanish Civil War in the 1930s raised hopes among socialists and communists in Portugal that the revolutionary wave might spread to the neighbouring country. Some left activists also travelled to the revolutionary centres in Spain to join the international brigades, bringing the spirit of revolutionary Spain back home. Yet the failure of the

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101 Furthermore, large parts of the working class were not directly affected by the law and the labour legal system as they were "self-employed, rural and domestic workers (comprised mostly of women)" (Oliveria 2018: 3).

Spanish left at the end of the 1930s not only allowed Franco's fascist regime to come to power but also strengthened the authoritarian regime in Portugal.

In contrast to Brazil's open economy to US imperialist foreign investment, the Portuguese Estado Novo under the Catholic extremist Salazar relied heavily on its colonial trade to maintain its (low) position in the imperialist chain. It followed the Italian and German path of nationalist protectionism, but in a much weaker form, and remained dependent on British and French investment (Blackburn 1974: 7). Because of this position, the Portuguese state claimed political neutrality during the Second World War. At the time, the privileged position of Lisbon's port and airport served both sides of the war as strategic hubs for the movement of diplomats, refugees, prisoners of war, munitions, food, and machinery (Rollo 2014: 130). As a result of this position, the Portuguese GDP grew substantially, mainly through investment in the construction of ports and the merchant fleet (ibid. 129).

Unlike Brazil's Estado Novo in the post-war period, Portugal's authoritarian regime remained stable but entered a period of crisis in 1961. In that year, workers in the African colonies of Angola, and later Mozambique, and Guinea-Bissau, rose and organised paramilitary struggles against the Portuguese empire. In the industrialised centres of Portugal, workers began to demand the right to elect independent trade union leaders in the late 1960s, followed by a series of illegal strikes. These movements were embedded in a growing labour shortage, as labour migration to northern European states meant that one-sixth of the Portuguese population lived abroad (Blackburn 1974: 8).

9.2.3 Corporatist Dockworkers' Union Structures and Unorganised Aviation Labour in Lisbon

During this period, dock work in Lisbon remained a very precarious and daily occupation. Informal family ties created a de facto closed shop for recruiting and training new workers. However, independent trade union structures did not develop until after the 1974/75 revolution. The existing trade union structures were fully integrated into the Estado Novo system and did not represent workers but rather controlled and channelled workers' discontent. The state had de facto total control over the activities of the unions and intervened whenever it deemed it politically and economically necessary (Camara 2022: 47). In this sense, the Union of Workers of the Port of Lisbon was a state apparatus that the government could dissolve. It could also replace its leadership and approve or reject its statutes and written material (ibid.).

Nevertheless, the dockers won some concessions. For example, in 1940, in a spatial conflict of their Social Reproduction Metabolism, they collectively demanded the construction of a "Casa de Contos", a permanent building that would provide shelter from rain and storm during "shape up" and the payment

of daily wages. The Casa de Contas was finally built in 1945 (Camara 2022: 49). This struggle was embedded in a larger national wave of strikes that erupted between the end of 1942 and mid-1944, addressing the cost-of-living crisis and inflation in Portugal as a result of the economic instability at the beginning of World War II (Ferreira 2012: 113).

In 1937, the entrepreneur Alfredo da Silva, supported by Swedish investors, won the contracts for the naval shipyards in the port of Lisbon (Fontes 2012: 190). During World War II, the industry became the main repair workshop for merchant ships (ibid. 191). Lisnave (an amalgamation of "Lisbon and naval") was established near the port of Lisbon in 1961, at the beginning of the anti-colonial wars. It included production sites and ports on both sides of the Tejo River. In the factory, workers built steel ships for international logistics, making Lisnave one of the most important industries in southern Portugal before the revolution. The shipyard was closely linked to the port. After the Second World War, the division of labour between employees, who were accountants, transport workers, who later drove small lorries, and dockers, who loaded and unloaded ships and lorries, deepened. Along this division of labour, three unions developed by 1957, with limited scope for struggle (Camara 2022: 50).

At that time, aviation was still predominantly a military activity. Apart from two French-controlled airlines and a weekly postal flight to Morocco, the Portuguese aviation workforce was still tiny and, unlike Brazil at the time, not unionised.

9.3 The 1960s and Mid-1970s: Authoritarian and Illiberal Practices in Brazil and Portugal

In Brazil, before and after the military coup of 31 March 1964, the port of Santos became a site of resistance and state repression of and against the labour movement. Prior to 1964, hyperinflation of up to 80 per cent created a cost-of-living crisis, especially for working class and low-income families (Giannotti 1995: 42-43). With the low wages that workers received, they could not adequately reproduce their labour force. Thus, the cost-of-living crisis threatened to disrupt the Social Reproduction Metabolism of workers, as they could not buy enough food to survive. As mentioned above, the city of Santos, on the coast of the state of São Paulo, had already established itself as a political and social centre, led by the various trade unions and with the active participation of local workers whose work was directly linked to the operation of the port of Santos. (Memorial da Resistência de São Paulo 2014: 1).

Ongoing struggles between the ruling classes and the workers under the dominant Stalinist leadership in the trade unions and parties, which remained tied to the "progressive bourgeoisie", still characterised the post-Estado Novo

period in Brazil (Melo 2016: 133). Nevertheless, the struggles of workers' organisations and social movements grew beyond and challenged the channels of the state apparatuses of the labour courts.

In 1960, Osvaldo Pacheco, a dockworker from Santos, became the leader of the National Federation of Dockworkers (Federação Nacional de Estivadores). A year later, he was elected the first president of the PUA (Pacto de Unidade e Acção – Pact of Unity and Action) an alliance of 45 port, maritime, and railway unions that organised Brazil's first national general strike on 5 July 1962 (Melo 2016: 132).[102] At that time, Santos was again one of the centres for organising a general strike. As well as strengthening the social base of the unions, they were also able to win the 13th wage or Christmas bonus for all transport workers (ibid. 147). The struggle had failed only two years earlier, when aviation workers occupied Santos Dumont Airport in 1960, as discussed below.

The social and labour movements pinned much of their hopes on the return of the presidential-parliamentary system and the politically strengthened President João Goulart, who could finally implement essential reforms (Teixeira Da Silva 2019: 99). However,

… [T]he president was still wavering on his institutional and political course, often leaning towards a conciliation with the conservative forces that, especially at the end of 1963, called for a "break with institutions", a euphemism for a coup.

Following the overthrow of President João Goulart, Brazil entered a 21-year dictatorship supported by "segments of the middle class, great landowners (latifundistas) and banking capital" who united under a "conservative authoritarian regime" (Leubolt 2015: 66).

9.3.1 Oppression of Unionised Santos' Dockworkers

Unlike Vargas, whose dictatorship was confronted in 1932 with a bourgeois-liberal movement that used the port of Santos as an asset to advance its demands, the new dictatorship immediately focused on Santos. While the port and the city of Santos had been the central space of resistance to the authoritarian movements, it now became the centre of state repression. At the same time, the only workplaces where workers immediately and openly resisted the military coup were the railways, the port of Rio de Janeiro, and the port of Santos. While strikes in Rio lasted up to 24 hours, dockers in Santos attempted

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102 Osvaldo Pacheco da Silva is a famous activist from Santos, who became a member of the Brazilian Communist Party in 1945 and represented it in the National Constituent Assembly in 1946, where he fought for "minimal demands", see also Marcela Costa/Sindestiva Santos: "A vida de Osvaldo Pacheco da Silva". A vida de Osvaldo Pacheco da Silva", https://www.sindestivasantos.com/post/a-hist%C3%B3ria-de-osvaldo-pacheco-da-silva [Access: 12.04.2021].

to shut down the port for three days (Giannotti 2007: 193). On 24 April 1964, just weeks after the military coup, the army and navy turned the old cruise ship Raoul Soares into a floating prison in Santos (Memorial da Resistência de São Paulo 2014: 3). Dozens of trade union activists, mainly dockworkers, were held there, interrogated about their trade union activities and their links to the Communist Party, and physically and mentally tortured (ibid. 4). By using this vulnerable space of resistance and transforming it into a space of illiberal practices and human rights violations, the military regime demonstrated that the new dictatorship aimed to dismantle the workers' movement and was well aware of Santos' economic and political strength and its chokepoint. Santos symbolised how authoritarian practices (II) could destroy previously strong workers' organisations.

After several months, the prison ship was transferred to a shipyard in Rio de Janeiro, where it was dismantled. Until the end of 1964, the female relatives of the imprisoned workers, in particular, regularly gathered at the dock to demand their release and share their grief and fear (Memorial da Resistência de São Paulo 2014: 5). The ship remained a symbol of the continuing terror in the streets of Santos:

The sinister vessel was part of a state terrorism scheme imposed on the city and its population. Besides the funeral figure of the ship, dragged close to Barnabé Island, in the streets of Santos, there was a massive presence of police from all forces. Trade unions were invaded under the threat of machine guns, and hundreds of arrests were made. At night, cars swept the streets with sirens blaring. Years later, the book Shadows Over Santos, by Carlos Mauri Alexandrino and Ricardo Marques da Silva, brought accounts by officers who admitted that the action in Santos was exemplary because of the combativeness of its working class. (Maurici de Oliveira 2013: 51; own translation [AE])

Until the end of the military dictatorship in 1985, trade union activity in Santos remained very low and restricted (Diéguez 2016: 110). The regime was financially supported by private transport companies, banks, and US and German capital. It banned strikes and dismantled democratic trade union structures and infrastructure, such as buildings, printing presses, vehicles, etc. The regime imprisoned trade unionists or made them "disappear" (Giannotti, 1995: 39-40). As Vito Giannotti (ibid. 40; own translation [AE]) wrote, the military dictatorship had a clear economic impact on the workers:

A phase of wage slashing has begun to guarantee new capitalist accumulation, closely linked to imperialism. With the state's repressive apparatus, the military dictatorship aimed to guarantee the implementation of a development project associated with multinational imperialism and based on a very high concentration of income.

9.3.2 Aviation Workers and the Battle for Aerobrás

The new military dictatorship, which took power in 1964, also had strong links with the aviation industry. Workers organised new unions, made bold demands to improve their working conditions, and also fought for the nationalisation of commercial flights, a project known as Aerobrás. The rapid growth of the aviation industry and the successful mechanics' strike in Rio de Janeiro in the late 1940s led to an upsurge in smaller strikes and the formation of other trade union structures. In addition to winning concessions in a spatial conflict of their Social Reproduction Metabolism by fighting for safe landing lanes, as mentioned above, the airport and aviation workers were the first in Brazil to achieve a special retirement age. This was an essential temporal conflict in the industry. The Sindicato Nacional dos Aeronautas (SNA) led the struggle in 1958. The retirement age was reduced from 64 to 45 and from 35 to 25 years of service. It was the first professional category in the country to win this right (Giannotti 1995: 43-44).

The leader of the SNA, Mello Bastos, also led a pilots' strike to reduce the number of flying hours from 12 to 10 in order to reduce the risk of fatal accidents due to fatigue, a conflict that continues to reverberate today.[103] Another struggle that continues to this day is the fight for paid overtime or the reduction of overtime. In 1952, the air transport unions made demands on the government, and in 1961, the national government finally agreed on a new law regulating overtime (ibid. 44-45).

However, the Brazilian government of the time was not always willing to make concessions. In 1960, it used authoritarian (II) and illiberal practices to accompany a strike for a Christmas bonus, e.g., the 13th salary. The infamous DOPS (Departamento de Ordem Política e Social)[104] and the air force police occupied the hangars and premises of Rio de Janeiro's Santos Dumont airport and broke the picket lines. During a similar strike in 1951, the state used its repressive apparatus, subjecting airport and aviation workers to physical violence and breaking up attempts to strike at the airport. In 1960, the Minister of Aviation threatened to intervene in the aviation workers' strike. In their strike meeting, the airline workers decided that if there was another example of repressive violence, they would organise a general transport strike in several states (Giannotti 1995: 47). Despite this threat, the private airline owner of Cruzeiro do Sul and the Ministry of Aviation waited 23 days for the strike to

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103 I use the term conjuncture following the definition of Moritz Ege and Alexander Gallas (2019: 91), who write: "A conjuncture is the "present moment" in the history of a social order, which can last for shorter or longer periods of time, and it is examined by showing how the dominant tendencies and strategic choices of key actors in a situation are conditioned by, and transform, underlying structures, institutions, and discourses."

104 The DOPS was an institution that existed in every federal state and was set up during the Estado Novo as a political police force, primarily targeting communist, socialist, anarchist, and other left-wing groups and trade union activities.

break out and 140 pilots, including the leader of the pilots' union, were dismissed (Fay 2004). The workers were forced to write letters of apology to the companies in order to be allowed to return to work without major sanctions (Giannotti 1995: 47). While the workers tried to use the Santos Dumont airport as a politically relevant chokepoint to win new improvements and higher wages, the repressive state apparatuses were in some cases able to repress such attempts through illiberal practices that accompanied their sabotage of accountability, e.g., authoritarian practices (II).

At the national level, however, airport workers created more than five regional unions and, in 1962, founded the first national federation of air and airport transport workers (FNTTA) (Giannotti 1995: 49). They also took part in the general strike of July 1962, alongside workers in other sectors, to fight for a 13th wage.

At the same time, air accidents were increasing and pilots were revolting against the unregulated, unsafe civil aviation industry. In a 1963 newspaper interview in the Jornal Última Hora, pilots were asked anonymously about flight safety. According to research by Claudia Musa Fay (2004; own translation [AE]), their answers were as follows:

The maintenance is precarious. Often, … we record in the logbook, observations about irregularity or malfunction of the aircraft, and the plane returns to traffic the same way with an observation to make a new check-in service. The fear of losing our jobs, of being blacklisted by companies in a poorly paid and over-competitive labour market, forces us to fly unsafe.

This quote is strikingly similar to statements made by airport workers in my recent research at Santos Dumont Airport, who fear that if they report a lack of maintenance, companies will fire and blacklist them for whistleblowing and "damaging the industry". The spatial conflict over safe workplaces has not disappeared or reappeared in recent years.

On 31 May 1963, the airline VARIG dismissed the president of the FNTTA, Commander Mello Bastos, who was also the president of the Sindicato Nacional dos Aeronautas. The pilot advocated and lobbied the government for a nationalised airline industry, "Aerobrás", to overcome the dependence of aviation workers and their job security on the unregulated dynamics of the private market (Fay 2004; Fonseca Monteiro 2006: 86). Following his dismissal, airport workers, aeronauts, railway workers from Rio de Janeiro, dock workers, oil workers, and airport baggage handlers went on strike to demand his reinstatement (Fay 2004). The movement was broad because Mello Bastos was a pilot at the time and was known for his repeated participation in union committees and struggles for decent work in the transport sector (Giannotti 1995: 50-51). The private aviation company VARIG was forced to reinstate the then leader of the airport and aviation workers.

However, behind the back of the increasingly pro-labour Goulart government, which was considering supporting Aerobrás, the private airline owners

became part of the driving force behind the military coup against the government. In an attempt to control the aviation unions, they ran a rival slate in the 1963 election of new union officials (Giannotti 1995: 51). This time, however, the left-wing slate managed to win these crucial elections and at the end of the year reached a single wage agreement for several categories of aviation workers. All the aviation unions signed this agreement, which guaranteed a 90 per cent wage adjustment for all and the reinstatement of colleagues recently sacked by the companies, especially VARIG (ibid. 52).

Just two weeks before the coup d'état, the Goulart government openly stated that it had been persuaded by the aviation unions to create "Aerobrás". However, the reform was swallowed up by the military uprising of right-wing forces, supported by private companies who feared that a national airline would limit their political influence in the industry and market share. Trade union officials and delegates in the aviation unions were all replaced by right-wing supporters of the coup, who also destroyed the archives and materials of former activists (Giannotti 1995: 59). As in the case of the Santos dockers, the new authoritarian government stifled any political or industrial activism and imprisoned, exiled, or isolated left-wing trade unionists (ibid. 61).

Despite the dismantling of trade union structures, civil aviation underwent a scale shift when the Ministry of Aeronautics was completely subordinated to the military apparatus and the national air force (Santa Cruz Oliveira et al. 2003: 1). The new military government thus muted resistance, but attempted to bring the entire civil aviation sector under military control through the authoritarian practice of scale shifting. In this way, the new military dictatorship was authoritarian because it abolished all forums and forms for workers to demand accountability and organise against attacks on their Social Reproduction Metabolism.

By the 1970s, the leading union, the SNA, like the dockers' and other transport unions, had to change its strategies (Santa Cruz Oliveira et al. 2003: 2):

… [They] had its role reduced to the routine of daily issues because collective mobilisations were absolutely forbidden. Although the democratic thought survived within the category, through the former airline employees who remained in the union leadership, the history of victorious fights and campaigns became more and more distant.

9.3.3 Regaining Strength: Brazilian Aviation Workers in the 1970s and 1980s

At the beginning of the 1970s, the labour movement in the formerly strong aviation sector remained comparatively inactive, with no record of strikes or major assemblies. This changed in the late 1970s and early 1980s, with a general upsurge in self-organised labour, social movements and NGOs (Fontes

2010: 243). At the end of the 1970s, the labour movement in the aviation sector recovered slightly (along with a more general upswing in industrial conflicts) and at the same time workers, raised demands for a share in economic growth (Giannotti 1995: 65).

Compared with port workers, Brazilian air transport workers were able to rebuild their strength during the final period of the military dictatorship. The main aviation labour law, 7,183 of 1984, was the result of opposition trade union activists who had reorganised their union lists and won union leadership elections by 1981. It contained improved regulations on shifts, breaks and holidays, important temporal advances for workers. However, when the still-military government introduced the Aviation Labour Act, this did not mark a final success, but rather the beginning of open strike movements and confrontations in the sector (Santa Cruz Oliveira et al. 2003: 5). This development shows that laws and legal changes are not an achievement in themselves, but open up new legal arenas for actors in class conflicts (Vestena 2022: 151).

One of the first groups to return to organised labour strikes was the Bela Horizonte pilots in 1979 (Giannotti 1995: 63). Giannotti points out that these pilots had similar working conditions, such as the "avulsos" in the ports. Before the strike, they were freelancers and demanded a contract that would integrate them into the company. The strike was successful; the category of "avulsos" in aviation had to be abolished by the Ministry of Aviation, and the pilots were transferred to a wage system with permanent positions (ibid. 63).

In Bela Horizonte, São Paulo, and later Rio de Janeiro, new oppositional nuclei developed in the union structures and made several attempts in the 1980s to regain influence in the unions through leadership elections and to move them away from the influence of government-supported workers (Giannotti 1995: 64-67). At the same time, the white and male-dominated category of pilots was increasingly opened up to women workers, who also entered the leadership of union structures and, together with flight attendants, created their structures to monitor women's working conditions in aviation:

The knowledge that the aeronautical activity, by itself exhausting for the human body, overloaded women even more, led to the creation, within the entity, in the same year, of the Commission of the Woman Aeronaut (CMA). There, the members could study aspects of their profession within a structured group and base specific claims, to be sent by the union to the companies, in the form of items of the negotiation guidelines, aiming at better working conditions. (Santa Cruz Oliveira et al. 2003: 4; own translation [AE])

As pointed out in section 7.1.2 on health and safety in the aviation and airport industries, female aviation workers are particularly affected by working in the air, experiencing hormonal changes, an increased risk of certain types of cancer, but also various forms of harassment by passengers or male colleagues (Santa Cruz Oliveira et al. 2003: 4).

One spatial conflict in the Social Reproduction Metabolism of female workers was the lack of crèches or childcare facilities near the airport. Flight

attendants have been fighting for such facilities since 1978. In 1981, the CMA established 24-hour crèches at or near airports. In 1986, VARIG agreed to pay 50 per cent of the rent and equipment costs (Santa Cruz Oliveira et al. 2003: 4). Today, the right to access a 24-hour crèche or other childcare is still guaranteed by the 1984 and 2017 Aviation Labour Acts.

In 1983, the SNA not only acted as a trade union daily but also reorganised the lobbying work for aviation, from airport workers to pilots, in order to achieve a new aviation labour law. Finally, in April 1984, the new Law 7.183 was implemented, which would allow for the regulation of work, including the right to access childcare facilities (Santa Cruz Oliveira et al. 2003: 5). However, it lacked an adequate health and safety framework, such as adequate rest periods and shorter shifts. Therefore, despite the change in government and Brazil's transition from a military dictatorship to a presidential parliamentary system, there were more strikes in the aviation sector, partly due to a still high number of air accidents (ibid.).

In 1985, flight attendants and pilots (aeronautas) and airport workers (aeroviários) launched a joint strike campaign in which they set up the Unemployment Assistance Fund (FAD), "a mechanism to financially support those dismissed for participation in the strike" (Santa Cruz Oliveira et al. 2003: 5). During this period, workers attempted to negotiate wage increases and compliance with professional regulations. However, the larger airlines of the time, VARIG and VASP, did not meet the demands (Santa Cruz Oliveira et al. 2003: 5). As a result, in 1987, the SNA launched a wage campaign entitled "All that's now left is to lose the fear". Two economic plans were negotiated with the companies, but they still failed to keep pace with inflation (ibid. 5). In December of the same year, another joint strike was launched. This time, however, the companies invoked the still-existing strike law Decreto-Lei no. 1632/1978, which prohibits strikes in the public and essential sectors. As a result, in 1960, the airport police occupied Santos Dumont airport to prevent workers from protesting and picketing.

In the AMORJ archive of labour struggles in Rio de Janeiro, I found a photograph of the Santos Dumont airport, taken in December 1987. On the back of the photo, an unknown author was typing:

An example of how the Sarney government deals with workers' problems: a strike is a police matter! In the strike of 87, the Aeronautics police occupied Santos Dumont Airport. (Own translation [AE])

In contrast to the Lisbon airport case, I was not able to talk to eyewitnesses of this particular conflict with the police. Nevertheless, when I found the photo in the AMORJ archive, I assumed that it was linked to the national air transport strike, which was banned by a strike law dating from the end of the military era. The note on the back of the photo is a statement by a worker or sympathiser of that strike. The quote draws attention to the apparent contradiction between the first democratically elected government of José Sarney and the authoritar-

ian practice (II) of using the police state apparatus to prevent a strike. Some 90 workers were also dismissed, including the SNA leadership, some of whom were only gradually reinstated.

Nevertheless, according to Giannotti (1995), the strike wave won important concessions. Firstly, it was the first time that Transbrasil, VARIG, VASP, and TAM held a joint strike with all categories united. Secondly, they won a general wage increase of 44 per cent, a 50 per cent increase in extra pay for night shifts, and double pay for Sundays, holidays, and overtime. In terms of time conflicts, the movement was able to build on the pre-dictatorship period, when they had already won the retirement age of 60. They won a regulation that allowed them to take 60 days off, and aviation workers became the first category in Brazil with a fixed 42-hour working week (Giannotti 1995: 91-92).

Furthermore, in 1989, the Brazilian strike law was amended along with the new Brazilian constitution, legalising the right to strike in essential sectors such as chokepoints and the public sector (Rebêlo 2019: 255).[105]

9.3.4 Disruptive Struggles in Pre- and Post-Revolutionary Portugal

While the 1960s and 1970s meant a tough climate for the Brazilian labour movement, especially in the logistics and transport sector, Portuguese trade union activists were able to make progress in self-organisation. This process was embedded in an economic transformation of the Portuguese regime. The Salazar regime, embroiled in colonial wars, changed course towards a more Brazilian foreign policy. It abandoned the protectionism that had dominated the Portuguese state since the 1920s and opened its markets (Blackburn 1974: 7). Major private companies such as CUF/Lisnave welcomed this move. It joined forces with Dutch and Swedish shipyards to attract further investment (ibid.).

In 1967, Lisbon's Lisnave shipyard benefited from the international situation. The Six Day War in the Middle East led to the closure of the Suez Canal, forcing shipowners to use the Cape route. As a result, the Lisbon-Setúbal region set a record for its belated industrialisation. In 1969, Lisnave accounted for 39 per cent of the world's repairs of ships up to 300,000 tonnes (Fontes 2012: 191). In this way, the port of Lisbon and its industries became a substitute for the Suez Canal, one of the most critical global chokepoints, which was caught up in military and geostrategic conflicts and was, therefore, no longer usable for merchant fleets (P38 2019: item 28).

The accelerated industrialisation process was one of the elements that played a role in how and why the Lisbon port, shipyard and airport became

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105 Although, as Felipe Cesar Rebêlo (2019) analyses in his text, the causes of a strike are still contested within the legal field itself, especially in relation to political and solidarity strikes.

chokepoints in the early 1970s. Workers used these critical spaces for class struggle against sabotaged accountability, low wages, and lack of health and safety at work. A few years before the Portuguese revolution, the Lisnave shipyard and the TAP workers at the airport became the most radicalised groups of workers within the movement (Blackburn 1974: 32).

The Lisnave shipyard employed around 10,000 workers, the largest workforce in any industry in Portugal at the time (Varela 2010: 350). In 1969, the first strike took place, organised by clandestine independent trade union structures. Their demands were twofold: higher wages, but also, as Raquel Varela (ibid. 349) points out, political demands such as the end of the colonial war and Portugal's withdrawal from NATO. The workers had a high level of self-esteem as they watched the sector grow and their role in the construction and maintenance of naval vessels, some of which were sent to the African colonies. Despite some redundancies, the company had to make concessions on pay. While in Brazil it was the aviation sector where workers were the first to win a shorter working week and a lower retirement age (both to reduce the number of accidents) in Portugal it was the shipyard sector where these time conflicts were fought: The Lisnave workers won the 40-hour week, a retirement age of 55, free medication, health and safety compensation, and the right to organise temporary workers (ibid. 351-352). At the same time, most of the neighbouring dockers remained in such temporary positions and began their struggle for a Collective Bargaining Agreement (CBA) (Camara 2022: 53).

In 1968, long-time dictator António Salazar fell ill with a stroke and was replaced in the Estado Novo regime by Marcelo Caetano. The change coincided with the peak of the brief industrialisation boom in the Lisbon-Setúbal region of southern Portugal, the proletarianisation of a large peasant population, a housing crisis, and a small wave of strikes. The government made concessions, allowing workers in some sectors to put forward their slates for union leadership elections (P18_1 2017: item 4). Among these concessions was the first CBA for dockers in Lisbon in 1970, which introduced a more standardised set of rules on wages and working hours. However, workers still had to negotiate with the company commission, which had been set up in 1960 (Camara 2022: 53). By comparison, the labour courts in Brazil provided much more scope for challenging the labour regime and employers.

9.3.5 The Battle at Lisbon Airport: Harbingers of the Revolution

In 1967, at Lisbon airport, left-wing trade unionists began to build clandestine and independent trade union structures even before the government's liberalisation of trade union policy. These later laid the foundations for the *Intersindical*, Portugal's first independent trade union confederation, which only merged with the communist-dominated CGTP after the revolution.

Among the independent trade unionists were aircraft technicians. After training, these workers chose to work at the airport. In this systemically relevant profession, they were safe from being drafted into the colonial war (P18_1 2017: item 4). Airplanes became increasingly relevant to the war effort, and the nascent civil aviation industry was partly suppressed in favour of warfare. Nevertheless, there were already trade union activists among the flight attendants. Activists from the state-controlled metal, airline, fishing, and other transport unions met to develop a common strategy for a joint union list and a list of demands. The interviews I collected with activists from this period provide a powerful insight into the regime's authoritarian practices (I-II) and resistance to them. The TAP White Book also traces the history of disputes between union structures, management, and the government before the revolution. Both the interviews and the White Book help to outline the workers' struggle at the airport. It is a historical textbook example of how the government and the company repeatedly sabotaged their accountability, for example, by using authoritarian practices to suppress workers' demands (Sindicato Central do Lisboa 1974: 12-14).

In their first meetings, which were communicated to individual activists through a complicated mixture of memos and secret telephone messages, Intersindical trade unionists drew up a list of demands from the different sectors (P21_3 2017: items 53-56). These demands were initially addressed directly to the TAP after the new progressive union leadership had been officially elected and confirmed in 1972. The new union leadership list won around 1,200 votes against the right-wing list's 11 votes (P18_1 2018: item 4). The TAP management refused to negotiate with the new union leaders for several months. (Sindicato Central do Lisboa 1974: 15-30; 30-35). In this way, they sabotaged their accountability to the workers who were demanding improvements in their working conditions, a form of authoritarian practice (I).

In a second step, the independent trade unionists started to organise more significant workers' assemblies. On 11 April 1973, the first airport workers' assembly was held with about 600 workers from TAP. A month later, 1,000 workers took part (Sindicato Central do Lisboa 1974: 38). The demands put forward by these assemblies were directly related to the temporal social conflicts of their Social Reproduction Metabolism, such as "longer holidays, shorter working hours, … protection against illness, retirement and invalidity" (ibid. 43; own translation [AE]).

On 11 July 1973, the workers planned another meeting to prepare a strike for their demands. This time around 5,000 workers came to the meeting. The large gathering outside the meeting hall in the centre of Lisbon drew the attention of the riot police, who banned the meeting and used truncheons against the workers. As the night wore on, more and more workers flocked to the meeting. The Intersindical leadership demanded that the government open the Benfica football stadium for their meeting (P21_3 2017: item 8). The government

rejected this demand and police violence against the workers prevailed (ibid. item 9). So, the airport workers decided to change their plans.

Once there, the police were beating us. And the only one with a voice [shouted]: "Everyone to the airport!" So, the guys stormed off to the airport. This was the 11 [July] … and that night at the airport, we broke everything. The police are unbalanced. The forces were here. We ended up here. Here, in the river of police officers. (ibid. item 14; own translation [AE]).

That night the workers decided to march to the airport and use it for their assembly. However, the state responded by sending the riot police to repress the meeting again with illiberal practices, including physical violence. In order to defend their assembly, the workers organised a massive resistance (P20_3 2017: item 18).

This battle was really very fierce. As I said, the police were shooting. The people shot back at the police with these bullets, with these metal bullets and with the twins. The people from the offices also threw typewriters out of the windows at the police, and the police had to leave. (P18_1 2017: item 6; own translation [AE])

The bulk was in the hangar, where the planes are located. And so, I fled and ran into them. An hour later, the police wanted to enter the hangar, which was open. And we let it open, but inside the hangar, it was all full of ammunition. … Several pieces of iron were everywhere in crates. These were our bullets. In the hangar, you have water cannons, you have … on the ceiling … there are foam cannons to eliminate the fire. Several cannons were facing the door. … There was a [Boeing] 747 there. And the police came. And we had the cannons all setup. We would blow up the plane, and we told the police if it entered, the plane would blow up. It was all being prepared. They had the good sense not to enter under these conditions. (P21_3 2017: item 16; own translation [AE]).

The government engaged in what has been described in section 8.3 as a second form of sabotaging accountability. It used the police to try to break up the meeting and strike at the airport, which was a reaction to the previous failure of the TAP directors to respond to the new union leadership. This second form of authoritarian practice (II) was accompanied by illiberal practices such as shooting and physical violence against workers and their bodies.[106] Compared to the attempted blockade of the Santos Dumont airport in Brazil, the Lisbon airport workers seem to have been able to occupy the danger zone of the airport earlier, the hangar with a Boeing 747 full of fuel.

Airport workers went on strike following the Lisbon airport dispute in 1973. Some of their more immediate demands, such as no punishment for striking workers, were met (P18_1 2017: item 6). However, even if the manage-

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106 It is difficult to find numbers of people who died during this battle. The three interviewees who partially attended the battle were sure that there must have been deadly wounded or shot workers, but could not give exact numbers. Robin Blackburn (1974: 11) mentions the event briefly stating: "The TAP workers only won some of their demands by resorting to extraordinary methods of struggle and in the teeth of vicious repression: at one point they seized a Boeing and by the end of the struggle two workers had been shot."

ment did not dismiss workers, the government tried to punish the leading activists of that strike, who had to flee the country (ibid.).

9.3.6 The Transition of Portugal Towards Democratic Parliamentarism

During the revolution, a variety of actors, including anti-colonial forces in Guinea-Bissau, Angola, and Mozambique, a war-weary army, student, women, and labour movements, occupied land and industry, and developed a new system of education, health, law, and labour relations (Accornero 2015). As such, the Portuguese constitution is a mosaic of different class demands. While it was one of the most progressive legal frameworks in terms of labour and reproductive rights (Esposito 2014), the capitalist mode of production remained somewhat intact (Varela 2014: 15), tamed by paragraphs prohibiting privatisation (Fonseca/Domingos 1998).

Eighty per cent of banks and 25 per cent of land were nationalised. According to Barreto (1993: 461-462), the nationalisation process mainly targeted the seven large national companies involved in finance and colonial trade. However, the multinationals from France, the US, or West Germany "were not directly affected by the nationalisations and only a few closed their Portuguese subsidiaries after the large wage increases of 1974-75" (ibid. 462).

During the Portuguese revolution in 1974, TAP workers played a key role in the protests, demonstrations, and strikes. The company was one of the largest and most important transport companies in Portugal at the time and employed a significant number of workers (P18_2 2017: item 4). TAP ground workers, such as engineers, technicians, and pilots organised in the Intersindical, played a central role in occupying and taking control of the company (Varela 2014: 138-155). During the first period of the revolution, workers regularly organised demonstrations against dismissals, for higher wages, or in solidarity with other sectors. Interviewees stated that one of the demands was for an equal wage system that would pay all workers in the Portuguese airline industry the same wage (P21_3 2017: item 55).

TAP workers also challenged attempts by right-wing military officials linked to General Spinola to stage a coup in the first 18 months of the revolutionary process:

Then at the coup on 11 March 75, the Coup was around here. That was the rally. That was a regiment of artillery. Here was a stronghold of the leftist military, and it was bombed by the Air Force and surrounded by the paratroopers. And it was ordered to surrender, and it didn't want to. And TAP was very close by. The workers from TAP came. They were running. … At that time, only a few people had their own cars. They came and started talking to the paratroopers. "What are you doing here? What do you mean, a coup d'état? This is a counter-revolutionary coup d'état!" And then there was this famous scene, which was recorded by RTP and still exists in the film archives of RTP, where the paratroopers embrace with the

surrounded soldiers. … They meet and without the weapons. They drop the weapons and they come. And there is a fraternisation between the troops who had been manipulated by Spinola and other officers. And those who were supposed to be more of a target, so to speak." (P18_1 2017: item 8; own translation [AE]).

In the days that followed, workers who had walked off the job to prevent the coup were sacked, to which the TAP workers responded with a strike that successfully forced the company to withdraw the dismissals (Blackburn 1974: 27-28). However, the coup d'état of November 1975 could no longer be prevented, as the revolutionary process entered a crisis in which the economic situation, the power vacuum and the infighting within the armed forces mutually accelerated.

Lisnave's workers, like those at TAP, also played a crucial role in the Portuguese revolution of 1974 and beyond. In meetings and a first strike in May 1974, they demanded wage increases and better working conditions (Varela 2010: 351). Management initially responded by occupying and expropriating factories (Blackburn 1974: 20). In September of that year, they joined a demonstration by TAP and postal workers (CTT) to reject a new law that would restrict the right to strike (Varela 2010: 352).

In the first years after the revolution, the dockers remained very focused on their category and fought for a second CBA, which they won in 1976 (Camara 2022: 53).

During the revolution, the TAP and Lisnave workers were able to use chokepoints very effectively on several occasions to challenge authoritarian and illiberal practices (I-II). The mass movements for a democratic socialist regime were able to improve the workers' Social Reproduction Metabolism in Portugal. Organised workers in the transport sector in particular benefited from these improvements. The dockers still had to re-organise independent trade union structures, but they had already won some small concessions by using their potential logistical power in the port of Lisbon in the context of the Carnation Revolution.

9.4 Authoritarian and Neoliberal Practices in the Brazilian Port and Airport Sector

When did the neoliberal period begin? The rollback of social reforms, privatisations, violent dismantling of labour movements, and casualisation of wage labour in Chile under the Pinochet dictatorship are often cited as the cradle of neoliberalism (Álvarez Torres 2019: 202). However, events in Brazil a decade earlier bear some similarities. In Brazil, the attacks on organised transport workers, the resistance of companies such as VARIG to the establishment of a national airline, the right-wing military dictatorship in Brazil in

the 1964s and the establishment of the prison ship "Raul Soares" may have been forerunners of events in Chile a decade later (see also Diéguez 2016: 111-112). The exploitation of workers in the expanding aviation industry found few organised barriers to defend the Social Reproduction Metabolism of workers. The Brazilian economy was booming, growing at 10 per cent until the mid-1970s (Giannotti 1995: 77). The obstacle to such economic development and increased foreign investment was probably the organised labour movement. In capitalism, however, no economic boom lasts forever and capitalist factions have to implement new strategies to create new regimes to ensure economic stability for foreign and domestic investment. An instrument such as the destruction of the organised labour movement can only be used once to influence the economy.

Already in the 1980s, Brazil entered a period of hyperinflation of more than 250 per cent, rising official unemployment (15 per cent of the active workforce) and was struggling to find its place in the global imperialist chain (Giannotti 2007: 245-247). Inflation rose to 1,900 per cent in 1989. According to Aram Ziai (2020: 132), the IMF entered Latin America in 1982, when countries like Brazil were unable to pay back loans to foreign lenders. Accordingly, the 1980s in Latin America have been described as a "lost decade" compared to economic development in other parts of the world (Kohli 2012: 535; Ramos 2012: 32).

However, it became a "golden decade" for union building and workers' struggles from below (Fonseca Monteiro 2006: 81). As seen in section 9.3.3, for aviation workers this meant progress in regaining their union structures from pro-state and pro-management trade unionists (*pelêgos* as they are called), improving working conditions and winning space and time conflicts. At the same time, as I will show below, dockers continued to engage in industrial action into the 1990s, with different results from those in the aviation sector.

The IMF's structural adjustment programmes were linked to processes of opening up the economy and companies to foreign private investors, which began to have an impact on workers' workplaces from 1990 onwards. According to Virgínia Fontes, FDI in Brazil grew enormously in the second half of the 1990s. Whereas between 1990 and 1995, FDI averaged USD 2,000 million per year, in 1996, it rose to USD 10,792 million and in 2001 to USD 22,457 million (Fontes 2010: 329). Under the government of Fernando Coller de Mello, an extensive programme of privatisation and restructuring was launched, including in the transport sector, which affected the Social Reproduction Metabolism of workers in Santos and Santos Dumont, as will be discussed in more detail below. These neoliberal changes were primarily accompanied by authoritarian practices (I) and (II). However, by using the IMF restructuring processes as an instrument of pressure, the neoliberal Brazilian

governments of the time also somehow transferred the conflict to an international scale, e.g., using authoritarian practices (III).

9.4.1 Santos' Transformation from a Port City to a City with a Port

In the port of Santos, the first containers arrived at workplaces in 1965, a year after the coup, restructuring workplaces towards mechanisation (Queiróz et al. 2015: 45-46). Over the years, the new machinery for standardising transport led to a wave of redundancies without any resistance from the unions. And although the Brazilian state and labour movement found their way back to more democratic governance in 1985, further privatisations of port and airport services, as well as constant attacks on newly organised labour, became a permanent feature of Brazil's new parliamentary democracy (Machin et al. 2016: 193; Galvão et al. 2017: 155; Nogueira/Costa 2019: 97).

Since the industrial era, the port of Santos was mainly exploited by the Compania Docas do Santos. In 1890, it obtained a concession to operate the port for 90 years (B45_3 2018: items 35-36). In 1980, the concession expired, and the port, land, and infrastructure were returned to the State of São Paulo. At that time, the number of workers directly employed by the port was around 20,000. Half of them worked directly on the waterfront, while the other half managed the cargo, ships, blocks, etc. (B45_4 2018: items 8-9). Similar to the overall port operation in Hamburg, for example, a large part of the work in Santos is done by so-called "independent" dockers, so called *avulsos*. This group works on daily contracts but also has considerable temporal autonomy, as discussed in section 7.3.1. One of the main struggles in the port of Santos targets the Social Reproduction Metabolism of these "independent" workers.

Before the re-privatisation of the port, Santos was still considered a red city, with one of the first mayoralties from the newly formed Partido dos Trabalhadores (PT) (B45_4 2018: item 6). However, the transformation of the port into a neoliberal logistic infrastructure meant the disengagement between working culture and general urban life in Santos (B45_4 2018: item 9). Between the end of the 1980s and the beginning of the 1990s, new regional port strikes returned to the surface in Santos. As in Santos Dumont, during a strike in February 1987, a military state apparatus, the Navy, occupied the port of Santos and the port of Rio de Janeiro in order to obstruct strike activities through authoritarian practices (II) (Giannotti 2007: 253). In 1988, the Brazilian government made a new attempt to privatise Brazilian ports, which, according to Diéguez (2016: 114), led to a national port strike on 17 October 1988.

Before the 1964 dictatorship, half the population worked directly or indirectly in the port. After the attacks on trade unions and neoliberal practices to transform the port industry through technological advances, layoffs, and the

dismantling of the closed shop system in the 1990s, Santos transformed from a port city to a city with a port (B45_4 2018: item 4). This transformation created a cultural vacuum that was filled by more conservative and neoliberal thought collectives.

A child of a dockworker reported (B45_4 2018: item 9; own translation [AE]):

Today, we have a total of three thousand workers in that port. What are three thousand workers in a city of 400 thousand inhabitants? Nothing. It makes no difference. And that's important because you're going to deconstruct that more progressive culture, and you're going to bring another kind of culture … you lose space here, and you will be in the place of this other culture with emptiness, and someone occupies it. So, there is a vacuum that is occupied by another culture.

Santos was transformed from a "red" to a "blue" city, with still considerable electoral support for the conservative Partido do Movimento Democrático Brasileiro (PMDB), and in 2018, a large number also voted for Bolsonaro.[107] The city's once strong workers' movement had disappeared, with serious consequences for working conditions and resistance to the coming neoliberal practices.

As one interviewee reported (B47 2018: item 20; own translation [AE]):

There have been two new laws on the ports in less than 20 years that were motivated by the business lobby to take away our rights. To end our achievements that many of our grandfathers lost their lives for. So that we could be in this job market today.

9.4.2 The Neoliberal Transformation of Port Labour in Santos

The first of these two laws, which affected dockers in Santos and, in particular, their ability to organise themselves and their work, was passed in 1993 by the Itamar Franco government. In the midst of a severe economic crisis with an inflation rate of over 1,000 per cent and the process of the Brazilian constitutional referendum, the government sought to stabilise economic structures through neoliberal measures. Part of these measures was the dismantling of the public port and waterway infrastructure agency Portobrás, which had existed for only three years after the military dictatorship (Galvão et al. 2017: 155).

The Port Law 8630/1993 (also known as the Port Modernisation Law) was so central to the government that it tried to speed up its implementation through a provisional measure (MP), which allowed the law to take effect "immediately after its publication" and be fully approved within 60 days (Galvão et al. 2017:

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107 In October 2018, in Santos, Jair Bolsonaro received 55.22 per cent in the first election and 71.35 per cent votes in the second round compared to Fernando Haddad from the PT who only received 28.65 per cent. See also Gazeta do Povo, https://especiais.gazetadopovo.com.br/eleicoes/2018/resultados/municipios-sao-paulo/santos-sp/presidente/ [Access: 15.05.2023].

155). However, under the pressure of a national port strike, the longest of which lasted 41 days in Santos, the original bill had to be implemented regularly (ibid.). Nevertheless, the bill allowed for the expansion of the right of private companies to handle port operations (Article 1), the establishment of a Manpower Management Office (OGMO: "Órgão Gestor de Mão de Obra") (Article 18), a port administration (Article 33), and the Port Authority Council (CAP) (Article 30) (Farranha et al. 2015: 91). Here, the state apparatus of the Council of Santos, private companies and port workers are represented to negotiate working conditions in the port.

In her work on the privatisation of the port of Santos, Carla Diéguez (2016) highlights two crucial consequences for workers. First, she looks at the end of the closed shop system, which the dockers had been able to enforce institutionally in 1942 through the labour courts created in the Vargas era. The new law of 1993 provided for the OGMO to replace this system. It regulates the *avulsos* and aims to "end the dockworkers' monopoly" on port labour (Farranha et al. 2015: 91). The OGMO also organises the payment of wages and social and safety benefits from the various port operators to the workers (Galvão et al. 2017: 156). In section 7.3.1, I highlighted the temporal autonomy and the necessary autonomy for workers to decide who would work with them in the workplace, often arranged through family structures. This autonomy has been partially removed. As dockers were no longer centrally embedded in the social life of the port city, they were more often confronted with stereotypes and a lack of solidarity, which were taken up and extended by the newspapers (B45 2018: item 25).

As dock work still counts as a very well-paid job, in the time of the crisis from the 1990s, other workers who also struggled to get along experienced it as unfair that they did not have the right to enter this labour market when they were not literally part of the "family". (B45_2018: item 25). Thus, the OGMO now introduced a seemingly equal system so that everyone who wanted to enter the labour market of the port could attend a physical and an educational test and was not obstructed by the closed shop system (Nogueira/Costa 2019: 97). At the same time, the ports required higher educational knowledge from workers who would check the loading, operate the cranes, and regulate the safety of commodities. Reading and writing were not needed generations before. Now, along with increasing mechanisation and automatization, it has become a precondition for the job (B45 2018: items 41-42).

Second, the composition of the port's workforce also changed. Whereas before Port Law 8630/1993, oil refinery workers were part of the dockworkers, the restructuring separated the oil terminals from the rest of the port. As a result, the dockers became specialised. This division decimated the power of the entire dock labour force. The oil workers were now a separate sector to which the rest of the dockers no longer belonged, and vice versa (B45_1 2018: item 18).

The law also requires the port to be multifunctional. This means that everyone who works there should carry out traditional loading and unloading, planning of cargoes (*conferentes*), monitoring of safety conditions, etc. Despite this division of labour, there was a lack of planning for the training of all workers. However, this change in the division of labour would have made it possible to achieve a common union for the port, an *Intersindical do Porto*. As early as 2006, there were initial efforts by the unions to achieve this, but they were unable to overcome certain obstacles caused by internal union struggles (B45_3 2018: item 7).

During this period, working time in the port was similar to that in Portugal, with eight hours per shift. However, temporal autonomy remained even after the law, the OGMO, and attempts to automate shift rotation were implemented. As pointed out by Fatíma Queiróz et al. (2019: 64; own translation [AE]):

The organisation of hiring managed by OGMO has not innovated in the structure of management and distribution of the workforce. The way of distributing the work among the workers is the same as it was a hundred years ago, elaborated by the workers themselves, that is, a large wheel divided into work groups allows the temporary port workers to go around the entire port doing all the existing types of work. Each group of workers remains, for two days of the month, at a certain wharf and rotates until all the jobs are done, according to the availability of docked ships for loading and/or unloading. There is also a master class that also rotates along the wharves of the port of Santos. … Although electronic scaling is a fact, the workers continue to appear in a specific place of scaling for work that they call "wall", which leads to the understanding that electronic scaling is not yet total.

Despite the notion of a "modernised" port promoted by the 1993 law, the dockers have been able to maintain their division of labour and recruitment system.

Due to the very physically demanding work of loading and unloading ships, especially in the summer when the temperature in the hull can reach 50 to 60 degrees Celsius, four dockers worked in gangs of eight colleagues for four hours, taking a break and then rotating breaks within their team (B45_4 2018: items 17; 20-21). This schedule allowed them to survive on the job, using their autonomy to take breaks and decide when and how to share the work. This structure remained in place after the Harbour Act of 1993 but became increasingly controversial.

The 1993 Harbour Act mainly affected the organised strength of the unions in the ports, rather than the Social Reproduction Metabolism of the dockers. It did, however, undermine their potential to fight a new port law and led to a series of legal and industrial disputes in which dockers tried to repeal the new law. Again, as in the 1940s and 1950s, Santos dockers and their unions played a leading role at the national level. As a result, it took a full three years in this port for the law to be implemented and for workers in Santos to be registered with the new OGMO institution (Machin et al. 2016: 193).

9.4.3 A Conflict on Temporal Autonomy in Santos

As early as 1994, a second important change was made to dock work, which to this day is preparing a temporal conflict in the Social Reproduction Metabolism of dockers. The Brazilian Labour Code (CLT), introduced in 1943, regulates the length of the working day in paragraph 61, which stipulates that a normal working day must not exceed 12 hours. In the event of unexpected interruptions to work, an emergency extension of two hours may be granted but only on 45 days a year. Since interruptions in port work are more than possible due to storms, floods, and technical problems with cranes and ships, the CLT made an exception in paragraph 62 (c) for stevedores and shipyard workers, who were excluded from this regulation. They were allowed to work more overtime and to organise their shifts and breaks more autonomously. In 1994, the government removed this exception, which affected the time autonomy of the Santos dockers. In 1998, the government removed another exemption for the dockworkers. Paragraph 66 of the original CLT called for an 11-hour break between shifts, from which dockers on daily contracts were also excluded. Now the labour law also applies to their group (Diéguez 2016: 139). However, even after the law and the changes in the CLT, temporal autonomy remained, as the OGMO did not control the schedules and shifts of the temporary dockworkers.

The dockers in Santos remained very independent in terms of the regulation and rotation of their shifts, as the length of each task was never recorded. The OGMO's mission was to look at the work processes and record each duration in order to transform dock work in Santos into lean production and find ways to intensify the work processes.

However, OGMO's attempts to research and schedule the tasks of the Santos dockworkers failed several times (Diéguez 2016: 142-143). At the end of 2000, the OGMO-Santos even requested the support of the Military Police for the research and implementation of specific schedules for the work processes. Two hundred officers were sent "to supervise the 1 p.m. work schedule on 29 November 2000" (ibid.; own translation [AE]). The workers' reaction was so hostile and "violent" that the OGMO had to call off the attempts (ibid. 149). In this way, the dockers resisted encroachments on their Social Reproduction Metabolism and temporal autonomy.

Unable to control who enters and leaves the port and terminals and the schedules of tasks, the port authority and the OGMO adopted authoritarian practices (III) and escalated the temporal conflict. In 2004, as mentioned in section 3.2, the USA demanded the ISPS code, a procedure introduced after 9/11 and mandatory for all ports trading with the USA in 2004. Ports and shipping agencies worldwide were required to implement a number of security measures. One of these is controlled access to the port via special passports. The OGMO was given the task of carrying out this special control and, in this

way, gained access to the temporal management of labour in the port of Santos from May 2006 (Diéguez 2016: 151).

In 2012, the OGMO introduced a new regulatory regime and planned to use electronic cards to manage temporary access to the port. Again, the dockers on daily contracts refused to receive these cards. These cards were not sufficient to register all the different permanent tasks in the ports and to list the dockers accordingly. The dockers continued to work and register manually, distributing the various tasks among themselves autonomously. Despite these ongoing temporal conflicts in the Social Reproduction Metabolism of dockworkers in Santos, container TEUs "nearly doubled, from 4.17 to 8.19 million TEUs" between 1993 and 2013 (Galvão et al. 2017: 154).

A second port law was introduced in 2013 to deepen control over the port labour regime (12815/2013). It was signed by PT leader and then Brazilian President Dilma Rousseff and initially aimed to increase competition in the ports through private sector investment (Nogueira/Costa 2019: 99). As might be expected given the weakened position of the 1993 Ports Law, this time the new law, which affects working conditions, saw only a few demonstrations and strikes by dockworkers' unions and was implemented in June 2013 (Galvão et al. 2017: 156).

The devaluation of work was not achieved by reducing wages but by changing the time autonomy of the *avulsos*. An affected dock worker (B58 2018: item 21; own translation [AE]) reported:

… [W]e work six hours. And rest eleven. To then pick up a six [hours] job. Except that we are independent workers. Workers who have no guarantee of earnings in that job. We are not allowed to … have the right to do the double. The double that would be the continuation of the work of doing six more hours and then another six. Would be doing 12 hours…

When I attended a strike demonstration in March 2018 and the workers' assembly discussed the strike strategy, the issue was still looming. The avulsos, who still make up the majority of dockers in Santos (B49 2018: item 5), demanded to be guaranteed at least one shift in a row, to skip the 11 hours between shifts at least once, or to be guaranteed another shift if they return after 11 hours of rest (B51_4 2018: item 5). They have been trying to negotiate for some time (B53; 2018 B54; 2018; B55 2018). However, the government and the port authority refused to negotiate for this category, using authoritarian practice (I). The dockers felt they had no choice but to organise a 24-hour blockade of the port to force the employers and the regional government to set a new timetable for negotiations (B52_2 2018: item 1). Yet port labour was also overshadowed by the new labour reform introduced by President Michael Temer in 2017, which further intensified the conflict, as I will discuss below.

Both the port laws and the changes in labour law indirectly weakened the structure of organised labour. At the same time, they have allowed the entry of a larger female workforce (Nogueira/Costa 2019: 100). As Nogueira and Costa (ibid.) point out: "In truth, their entry into the sphere of productive work has

always been accompanied by prejudice, devaluation, in other words, inequality."

9.4.4 Neoliberal Practices Challenging Aviation Labour in Brazil

Before the 1990s, aviation workers were able to win significant concessions on wages and their Social Reproduction Metabolism. But the new decade marked a turning point in this struggle. Governments around the world moved to deregulate civil aviation. In the US, Southwest Airlines became the first low fare company following a 1978 deregulation law (Costa et al. 2010: 6). In the European Economic Area, the first of three packages of Open Skies agreements were introduced in 1987 (Bosch/García-Montalvo 2003: 10). In Brazil, the country with the largest aviation industry in Latin America, deregulation began slowly in the 1990s, allowing international and low-cost airlines to enter the market (Costa et al. 2010: 5). As will be shown below, the deregulation and the government's lopsided investment in outliers rather than in people and safety led to an aviation crisis in the 2000s that disproportionately affected workers and their struggles. While conditions for airport workers worsened with further deregulation and labour reforms in 2017, they improved for cabin crews and pilots as they were able to access their specific logistical labour power in the country.

In 1987, in anticipation of a new state constitution, the SNA launched the "Pássaro Civil" (Civil Bird) campaign to separate aviation from the Ministry of Aviation, which was part of the military state apparatus (Fonseca Monteiro 2006: 86). Given the role of the military dictatorship in dismantling the labour movement, the distrust of the military state apparatus within left or progressive trade unions was evident. The SNA union leadership under José Caetano Lavorato also reinforced the idea of "Aerobrás", or a national government body that would include workers and union representatives to negotiate health and safety standards (Giannotti 1995: 94). So far, only private aviation owners and government representatives have met in CONAC (Conferências Nacionais de Aviação Civil), excluding workers' views and knowledge of the industry (Fonseca Monteiro 2006: 87).

The conflict in the sector reached its peak at the beginning of 1988, when the SNA organised a strike during the carnival season, which again led to the dismissal of workers, including the entire leadership of the SNA, among them Lavorato, who was never reinstated (Fonseca Monteiro 2006: 88). As in 1964, CONAC, and in particular, the eleven private civil aviation companies, opposed the plan to build Aerobrás and instead, from 1991, allowed trade union representatives to attend the institutionalised meetings of the Civil Aviation Department (DAC) (ibid. 89).

Driven by the privatisation and restructuring programmes agreed with the IMF, in 1991 the airlines VASP, VARIG and Transbrasil began to compete aggressively for market share, with health and safety standards putting workers' lives at risk (Fonseca Monteiro 2006: 89). The airline company VASP led the process by introducing more flights and lowering ticket prices (ibid.). In 1992, the DAC set up a Câmara Setorial for the aviation sector as a regular body in which companies, government structures and SNA leaders met to discuss the crisis. This structure allowed for greater accountability and gave the unions a new arena in which to negotiate health and safety issues (ibid. 90).

The institution was briefly abolished, which can be read as an authoritarian practice (I), since its abolition led to the sabotage of the newly won arena of accountability. Two years later, however, the government had to reintroduce it under pressure from the unions and at a time when VARIG was announcing a wider programme of redundancies and demanding public aid (ibid.). The SNA demanded that no public money should be invested until there had been a public debate about the company's redundancy plans and working conditions.

However, despite public aid and pressure from trade unions to secure better working conditions, the airlines gradually began to adopt neoliberal practices that included "… [l]ayoffs, downsizing, disrespect for labour legislation, outsourcing" (Fonseca Monteiro 2006: 99; own translation [AE]).

At the same time, the Brazilian government and the state apparatus DAC implemented neoliberal practices and planned to privatise 67 airport infrastructures. These were to be managed by INFRAERO, which was founded in 1973 (Bosch/García-Montalvo 2003: 23). However, this neoliberal practice was not implemented. Instead, INFRAERO supported the growing "hub-and-spoke" system, pushed by the LFAs and their aim to reduce costs through tighter connectivity (Costa et al. 2010: 3). In this system, large groups of passengers are concentrated at larger hubs and dispersed from these hubs to smaller feeder flights (ibid.). In this way, smaller airports received less investment, while already large airports suffered from congestion. Even if it was not privatised, the public state apparatus INFRAERO redistributed public funds in the interests of private airlines and promoted the hub-and-spoke system. As Costa et al. argue (2010: 10):

Investments should be made not only to those visible parts of the infrastructure, such as airport terminals, but also in areas that are crucial to safety and functionality of the system.

9.4.5 The Fatal Consequences of the Hub-Spoke System

In February 1998, a fire broke out in a central administration building at Santos Dumont airport. It happened in the early hours of the morning, so no workers or passengers were harmed (Condé 2011: 164). It took firefighters eight hours to extinguish the blaze, and the airport had to be closed for several months for

renovation. The investigation team ruled out arson and stated that the incident was caused by a "thermoelectric accident".[108] I was unable to find any articles on the workers' views of this incident. Given their observation of the current situation at the airport (as stated in section 7.3.4) the fire may have been related to an already existing lack of infrastructure maintenance as a result of the hub-spoke investment policy (B63 2018: item 3).

The race to the bottom in safety standards in Brazilian aviation became even more apparent in the 2000s. As a result, historically important and large airlines such as VARIG, VASP, and Transbrasil went bankrupt and their remaining assets and staff were absorbed by low-cost carriers GOL, TAM and Azul (Fonseca Monteiro et al. 2009: 1).[109] However, it is precisely those airlines that remain in the market that would show the consequences of a general lack of investment in air safety.

In September 2006, a GOL airliner (an Airbus 737-800) collided with an Embraer jet, killing 154 people (Oliveira et al. 2009: 3). According to a study by Oliveira et al from 2009, Brazilian air traffic controllers were blamed for causing the accident. However, the controllers had already reported to the DAC in 2003 that there were not enough staff to cope with the airlines' plans to introduce a hub-and-spoke system. In response to the investigations against the controllers, they organised a work-after-rule strike in October 2006 and March 2007, which exposed the shortage of staff and the massive overtime that ground workers were entitled to in order to keep the air traffic system running. As the majority (80 per cent) of air traffic controllers are in the military, they were suspended and even threatened with imprisonment in response to their strike.

The air traffic controllers once again demanded the separation of the civil aviation industry from the military apparatus. However, despite the role of other government agencies in the negotiations, the government gave the lead role back to the Ministry of Aviation and the Air Force (ibid. 9).

The September 2006 accident caused a major aviation crisis in Brazil. A further breakdown of the radar system in October 2006 led to delays of around 146 commercial flights (Costa et al. 2010: 6). A subsequent strike by air traffic controllers in December 2006 delayed about 55 per cent of all flights. This affected civil aviation as well as tourism. In the Northeast region of Brazil, the tourism sector declined by 35 per cent as a result of the aviation crisis (ibid. 6).

In July 2007, just two months after the end of the air traffic controllers' dispute, another air accident occurred at the São Paulo Airport. A TAM plane crashed into a cargo hub, resulting in the deaths of 199 people (Oliveira et al.

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108 Article from the Folha de S. Paulo from 14. April 1998 "Fogo no Santos Dumont foi causado por 'acidente'", https://www1.folha.uol.com.br/fsp/cotidian/ff14049830.htm [Access: 28.06.2023].

109 Between 2015 and 2020 Azul also owned the majority of shares of the Portuguese flag ship airline TAP.

2009: 11). Neoliberal practices in the 1990s aimed at opening up the Brazilian aviation market and increasing competition between regional airlines played a role in these incidents (Fonseca Monteiro et al. 2009: 16). Fonseca Monteiro et al. also argue that the two major accidents point to the risk that the Brazilian government has lost control and knowledge of the aviation sector as a whole.

However, in response to the crisis, the state apparatus ANAC, which replaced the DAC in 2006, introduced new regulations that drastically reduced flights in the main hubs of the hub-and-spoke system (ANAC 2018). This followed studies suggesting that the main causes of accidents were airport congestion and too many flights (Costa et al. 2010: 8). Despite recognition of the pressures and problems of the hub-and-spoke system and the concentration of flights in a small number of airports, air traffic has become even more concentrated: In 2012, 60 per cent of air traffic was between São Paulo and Rio de Janeiro, in 2019 it will be 65 per cent (Paula Balan et al. 2020: 17).

Over the last three decades, Brazilian governments have implemented neoliberal practices such as deregulation and the opening up of the aviation sector. They have also used authoritarian practices (I + II), closing down bargaining arenas in the 1990s or threatening air traffic controllers with suspensions and imprisonment in 2007. The highly unionised workforce in the aviation sector has suffered several setbacks as a result of the fierce competition between old and new emerging airlines. In addition, airport workers at Santos Dumont are still exposed to a dangerous lack of regulation. As discussed in section 7.3.4, these conditions have not disappeared but are still prevalent. While working conditions on the ground remained precarious, in 2017, against all odds, they improved for workers in the sky.

9.4.6 The New Neoliberal Wave in Brazil

The Brazilian government of the PT and Luis Ignácio Lula da Silva, which came to power in 2003, sought to build, together with China and South Africa, a South-South imperialist chain as an alternative to the US-led imperialist chain. Here, Brazil would have a higher position than in the order marked by the (post-)Washington Consensus (Harris 2005: 24). The PT's initial strategy was to increase "the bargaining power of the developing countries" at the international level "so that they may become stronger and perhaps equal partners with the industrialised North" (ibid. 21). At the same time, the new government implemented neo-Keynesian programmes such as Bolsa Família, using its recent economic growth, based mainly on primary commodities, to "improve the life of the working class and poor" (ibid.). And the impact on the poorest sections of society was obvious. According to Nowak (2016: 84):

… [E]xtreme poverty decreased from 36 to 16 per cent between 2003 and 2012, the median income rose, the minimum wage saw considerable increases, informal employment went down in favour of regular jobs, and unemployment decreased to six per cent.

When the international economic crisis hit in 2007/08, the Brazilian economy remained relatively stable until 2015, when the recession began. Since 2010, however, the GDP growth rate "has remained significantly lower than in other emerging economies, reaching only 0.2 per cent in 2014" (Nowak 2016: 84). Against the backdrop of the recession, the centre-left PT president, Dilma Rousseff, was impeached on several corruption charges, pushed by the populist and extreme right in parliament and various business groups (Oliveira 2018: 14).[110] She was removed from office in 2016 and replaced by her vice-president and leader of the PMDB, Michel Temer.[111]

Under the pressure of the economic crisis, Temer's government has made a complete U-turn for Brazil towards neoliberal practices that would take workers' rights and labour standards back to the time before the CLT was introduced in 1943. The new labour reform was already proposed in December 2016. It was approved by the Chamber of Deputies in April 2017 (Oliveira 2018: 15). On 27 April 2017, the CUT and other union confederations called for a general strike against the new law (B65 2018: 29). Several more widespread strikes and demonstrations were also organised by unions, federations and social movements in the aftermath of that day. Nevertheless, the new labour reform was implemented on 11 November 2017, with serious consequences for the majority of workers in Brazil.

In the Temer proposal, more than 100 paragraphs of the CLT have been modified or deleted (Oliveira 2018: 15). The role of the labour courts has been side-lined; the reform favours individual negotiations between employers and workers (ibid. 16). In sections 9.2.1 and 9.4.2, I have shown how dockworkers in particular have used the labour courts to fight for temporary autonomy, wages and health, and safety measures. The marginalisation of the labour court system is an authoritarian practice (I), as these courts were crucial arenas for accountability and ways of achieving improvements for workers. Furthermore, the labour reform stipulated that trade unions would no longer have access to the "Imposto Sindical", a system in which the state financially supported trade

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110 Brazilian left-wing commentators speak of the three "B's" behind the impeachment – "Boi", "Bíbla", and "Bola" – symbols for agribusiness, the evangelical church and the arms industry.

111 Temer's party has won every election in Santos since the end of the dictatorship in 1985. It also determines who gets the presidency of the company Companhia Docas de Estado Sao Paulo (B45_3 2018: item 42). A process that I cannot go into here is that, during his presidency, Michel Temer was accused of corruption in the leases for Santos' port terminals, granting concessions to his "friends" for more than 70 years instead of the legal limit of 25 years.

unions by collecting a small amount of workers' wages (B41_4 2018: item 122).[112]

9.4.7 The Labour Reform of 2017 in Temporal and Spatial Conflicts

Using temporal and spatial conflicts as parameters for reading the labour reform, I found changes that have a direct impact on the problems already analysed in section 7.3 at the two Brazilian chokepoints. As such, the labour reform can be read as a significant neoliberal practice that potentially pushes almost all workers in different ways closer to a metabolic rift.

I refer to the changes made to the CLT in 2017.[113] Here, article (4) directly addresses the temporal conflict of the Social Reproduction Metabolism. It regulates

… [T]he period in which the employee is at the disposal of the employer, awaiting or executing orders unless a special provision is expressly provided for, is considered to be a period of effective service. (Own translation [AE])

The 2017 changes mean that any of the social reproductive activities listed below are no longer considered part of the "period of effective service". These are I. Religion; II. Rest; III. Recreation; IV. Study; V. Eating; VI. Networking activities; VII. Personal hygiene; (which includes showering in a rest room after working on a coal or soya cargo ship or an oil rig); VIII. Changing clothes or uniform when not required by the company.

This specification of which reproductive tasks are excluded from the working time and wage has all been implemented by the neoliberal labour reform via Lei nº 13.467, de 2017. These activities are not part of the essential productive time and, therefore, do not have to be paid for by the employer. At the same time, article 71, paragraphs 1 and 2, remain in force:

… [I]f work does not exceed six (6) hours, a fifteen (15) minute break shall, however, be mandatory when the duration exceeds four (4) hours. … Rest breaks shall not be counted as part of the duration of the work. (Own translation [AE])

As a result, workers are forced to spend less time taking breaks, washing, or eating. If breaks are not paid, the result can only be more fatigue, less concentration, and less energy, potentially leading to more accidents at chokepoints.

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112 This change provoked a very mixed reaction from the workers I spoke to. Some told me that the *Imposto Sindical* had split the trade union landscape and weakened workers' power, as it allowed the creation of more and more sub-structures, some of which were only set up to get money from the state and not to fight for workers (B64 2018: item 51).

113 The CLT can be accessed here, including all amendments and changes, http://www.planalto.gov.br/ccivil_03/Decreto-Lei/Del5452.htm [Access: 02.11.2022].

In addition to targeting the temporal conflicts of workers' Social Reproduction Metabolism, the 2017 labour reform also takes spatial aspects into account. In Chapter II of the CLT, Article 58, Paragraph 1 states:

The time spent by the employee from his or her place of residence to the effective occupation of the workplace and back, on foot or by any means of transportation, including that provided by the employer, shall not be computed in the workday, as it is not time at the disposal of the employer. (Own translation [AE])

The long distances for workers and the challenges of commuting without the ability to produce or reproduce in buses and Uber cars have been highlighted in section 7.3.3. Before 2017, the CLT provided that at least the time spent by workers in employer-provided transport was already counted as working time. Given the distance between the workplace and the home or residence of many workers, this regulation will also affect workers who consider staying in their cars or other precarious places to rest or sleep.

In general, this law could be indirectly responsible for more accidents in the future. The right-wing government of Jair Bolsonaro, elected in October 2018 and taking office in January 2019, is not expected to reverse these significant changes in the CLT. However, as Ana Garcia et al. (2022: 16) point out, the debate on Bolsonaro vs. PT (either Haddad or Lula) has been characterised by "fictitious polarizations". For some time, the PT could be seen as the "left hand of neoliberalism" and part of the establishment, unable to address further working-class grievances since the first wave of protests in 2013 (Nowak 2014: 19; Garcia et al. 2022: 10). The authors agree with a larger body of research that Bolsonaro was able to mobilise his supporters through "openly fascist, xenophobic, racist, anti-democratic" speeches and behaviour (Garcia et al. 2022: 10). However, they claim that the "real polarization" is characterised by social inequality and the fact that the level of extreme poverty increased to 27.7 per cent in 2020, and the informality sector increased from 32.5 per cent in 2012 to 41.4 per cent in 2019 (ibid. 16).

The 2017 labour reform significantly exacerbated this trend. Even under the PT government between 2003 and 2016, working conditions in ports and the aviation sector remained precarious, with a lack of health and safety measures, for example. In 2023, it remains to be seen whether the newly elected PT government under Lula da Silva will at least be able to reverse the 2017 reform, or whether it will require a more significant mass movement, supported by workers at the chokepoints, to challenge the state apparatus and neoliberal practices.

9.4.8 The General Strike in April 2017 and the Division of Workers

Given the history of the workers at the chokepoints of ports, airports, and especially air transport, why have they not been able to defeat the labour reform and Michel Temer's government?

In these final analytical reflections on work at the chokepoints in Brazil, I do not intend to answer this question in full. However, I would like to reflect on the role of cabin crew and pilot workers in this conflict. Apart from the military and lawyers, pilots, aviation mechanics, and cabin crew workers were explicitly excluded from the reform. In August 2017, aviation workers even received a contract that improved their working conditions and reduced their risk of a metabolic rift in the same year. Law 13.475/2017,[114] in some aspects, contradicts the labour reform. It could have been the prototype for improved health and safety conditions for all workers in Brazil.

In chapter 4, article 35, it states:

The working day is the duration of the work of the flight or cabin crew member, calculated from the time of his arrival at the workplace to the time of his termination. (Own translation [AE])

In other words, breaks, eating, hygiene, education/training, etc., which are excluded from the payments for most workers due to the 2017 labour reform, are explicitly highlighted as part of the paid working day for aeronauts. This inclusion of reproductive tasks in productive and paid working time is further specified in Article 41 on weekly working hours, which are limited to 44 hours and include "simulator training, on-site or remote courses, training and meetings" (own translation [AE]). In general, the law regulates mandatory meal times, the specificity of break rooms for sleeping, and transport time between and at the airport, all of which are regulated in favour of aviation workers. After the high number of fatal accidents caused by the deregulation of air transport over the last thirty years, their strikes and protests have been groundbreaking. In the light of the aeronauts' right, it seems reasonable to point to chokepoints as a "magic bullet".

The SNA pilots and cabin crew organised two strikes, one in 2015 and one in 2016, and because of the infrastructural importance of aviation in Brazil, the strikes did not have to last long to have an impact:

… [O]ur first strike was one hour. And the second strike was two hours. And it was enough to make a break to cause confusion that we would need to get attention. So, it's such a peculiar strike, a little bit different from the strikes in the United States and Europe, which is a full day, 24 hours or 48 hours. (B64 2018: item 24; own translation [AE])

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114 To be found here: http://www.planalto.gov.br/ccivil_03/_ato2015-2018/2017/lei/ L13475.htm [Access: 05.07.2023].

This is the "logistical power" of aviation in Brazil: It only takes an hour or two of organised strike action to win concessions. But the aviation law only applies to pilots, cabin crew, and aircraft mechanics, not to airport workers, whose working conditions are also linked to the safety of the entire aviation industry.

During the general strike in April 2017, airport workers took part in the movement against the labour reform, even temporarily blocking the entrance hall and the runways of Santos Dumont airport, together with other trade unionists, such as the teachers, who also supported the blockade of the ports (B42_1 2018: item 15). However, pilots and flight attendants did not take part in the strike, unlike in July 1962 during the general strike for the 13th month's salary (see section 9.3.2).

When I asked a union representative and a pilot why they did not attend, he replied (B64 2018: item 17; own translation [AE]):

… [T]he unions became a manoeuvring mass of these parties then the unions often left aside the interests of workers to make politics and enter into politics including much corruption. So, in a way the aeronauts and a significant part of the Brazilian population don't agree with trade unions. A large part of the population hates trade unions, even though they are the only way to protect jobs. … So, it's my union here we manage to make somehow a balance; we manage to defend the worker, which is a historical leftist agenda but without getting into the political discussion.

Taking this statement and the legal changes for aeronauts in 2017 together, it seems that the aeronauts have used their historically grown position in Brazil to negotiate improvements for themselves, trading their ability to paralyse the Brazilian economy for resistance to the worsening of working conditions for all workers. Given the urgency of their problems, it may be a significant factor that they saw no other way than to bargain their potential strength in an all-out general strike against a complete success for their category. The above statement reflects the deep divisions in the working class over the "fictitious polarisation". The PT and its affiliated unions were no longer seen as partners in struggle, but as corrupt, which is why the aeronauts organised their own breakaway. Nevertheless, on that day, port workers, airport workers, and oil platform workers joined the strike, defending the rights of all categories of workers who would suffer from a legal trend opposite to what the aeronauts had achieved for their own Social Reproduction Metabolism. As I pointed out in section 6.5.3, the aeronauts are dominated by white workers. The defence of working conditions in their "white" space in the air also showed the strong influence of racialised exploitation patterns to which they adhered.

9.5. Authoritarian and Neoliberal Practices in the Portuguese Port and Airport Sector

Looking at the beginning of neoliberalism, the Portuguese state is historically different from other Western states of the 1970s. In Brazil and other countries around the world, the neoliberal accumulation regime paved its way through society. Meanwhile, in Portugal, driven by the vital movements developed in the Carnation Revolution, there was initially an opposite development of nationalisation, democratisation, and organised labour regimes that allowed for a more extensive set of workers' rights than in many other countries at the time (Barreto 1993: 462).

However, the processes of democratisation and nationalisation were reversed in the 1980s as the PS and PSD sought to attract foreign investment and access to the European market. Inflation reached almost 30 per cent in 1984. While the state had become a huge employer through state-owned companies, the return of thousands of Portuguese from political exile and the colonies occurred at a time of severe economic instability and rising unemployment (Barreto 1993: 446). A political crisis ensued, with ten changes of government in nine years, following six provisional governments in the year after the revolution. The political and social situation had to be stabilised and the economy restructured to gain access to credit and the European market. By the 1990s, most public industries had been privatised (Küpeli 2013: 22).

Thus, in the 1980s and 1990s, the Portuguese state converged with other states in Western and Southern Europe in terms of neoliberal practices.

… [T]he globalised economy connects and generates interdependencies between disaggregated production chains, requiring countries to operate in a similar way to attract investment capital (Camara 2022: 57; own translation [AE]).

9.5.1 Neoliberal Practices in the Port of Lisbon in the 1990s

Compared to the role of the Santos dockers in the emergence of the organised labour movement in Brazil from the early 20th century until the 1990s, the dockers in Portugal were hardly known as a militant force, let alone as actors in writing strikes or filing cases in the labour courts. However, as the influence of the Santos dockers as one of the leading forces in the Brazilian labour movement waned, the organised dockers' movement in Portugal began to emerge and organise itself.

During the dictatorship, the state ran the ports. The dockers were organised in Coomapor, which was the state structure responsible for organising the supply of dockers. After 1978, it was dissolved and replaced by the CCTPL, the Centro Coordenador de Trabalho Portuário de Lisboa. This was a structure in

which the dockers initially ran the port themselves, similar to the dockers' system in Santos. In Lisbon, it took the Portuguese Revolution to achieve such a degree of temporal autonomy. However, the CCTPL was a tripartite system, involving the Ministries of Transport and Communications and Labour, as well as a workers' representative, whose influence on the port sector and dockers grew steadily. In 1984, the Permanent Council for Social Dialogue was created, and in the late 1980s and early 1990s, the port was restructured, resulting in 1,000 workers losing their permanent jobs in the port of Lisbon alone (Camara 2022: 55).

In 1993, the same year that the Brazilian port law was introduced, the Portuguese government, led by Mario Soares of the Socialist Party (PS), also voted for a new port reform that mainly affected workers.[115] It prepared the legal framework for the abolition of the remaining employment contracts, while still allowing for permanent positions (Camara 2022: 58-59). However, the impact on the Social Reproduction Metabolism and labour regulation has been positive, especially with regard to the temporal conflict of training time. The 1993 law, Chapter II, Paragraph 5, states: "… only persons with a professional licence may be employed to carry out work in the port" (own translation [AE]). Dockers in the port of Lisbon emphasised in my interviews that such a regulation ensures that new workers in the port have adequate training and knowledge about port work, and are able to protect themselves and their colleagues. Workers referred to this regulation during the first dockers' strike in Lisbon in 2014, which the new port law of 2013 removed. As one of those affected pointed out (P02 2015: item 6):

We have a new law here that is more liberal than any law of the country, in a specific way, because our law says, for you, to be a dockworker, this means you have only had to spend one hour in the port. It's like, take it to all the professions: A pilot of an airplane, or a photographer, or a journalist, for you to be a journalist, you just write one page of a newspaper, and now you're a "Pro". This is our loss; it's what we fight against, mainly.

In the 1990s, the unions in the ports were still fragile and involved in the tripartite system. They did not go on strike or try to organise protests against the restructuring of dock work and the constant layoffs of workers. Moreover, until 2014, around 19 unions organised workers in nine different ports in Portugal, resulting in a mosaic with no real militant or democratic trade union structure.

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115 I refer to the Port Law "Decreto-Lei No 280/93" – original text here: https://dre.tretas.org/dre/52737/decreto-lei-280-93-de-13-de-agosto [Access: 23.07.2023].

9.5.2 Upscaling: from Liverpool to Lisbon: The Founding of the IDC

In the mid-1990s, when the Liverpool strike took place in Britain, Portuguese union leaders from the port of Lisbon also travelled to the city to learn from the strike (P01 2015: items 7; 19). For the dockers in Lisbon, the Liverpool strike gave an idea of how international solidarity could be organised and how it would fail if a global organisation like the ITF did not consistently call for solidarity strikes in other ports. As one interviewee pointed out (P01 2015: item 12):

… [T]alking about Portugal, France, Greece, Sweden, some countries, that created a new world organisation of representing dockworkers in 2000, after the Liverpool strike, you know the story, you probably know the Ken Loach film, and there is everything. And after that, because the union in England betrayed the dockers in Liverpool, we created this new, as we call it, a real rank and file organisation, where the dockers take the decisions, not some bureaucratic staff, like in other worldwide organisations. … We belonged to ITF before. But we split in 2000. And then, well, it's the strongest and most effective way to deal with this problem of worldwide deregulation and privatisation.

The struggle in the port of Liverpool was defeated in the 1990s and, after about two years of industrial action, many workers lost their jobs or were transferred to insecure employment agencies with lower wages. But the Lisbon dockers learned not only from the defeats of that movement, but also from its later successes.

Trade union activists in Liverpool returned to the port to train a new generation of trade unionists and to fight for their insourcing from the Liverpool Port Authority, away from employment agencies. As one of the former Liverpool dockers reported (UK31_1 2018: item 2):

… [W]e then went back 2011 to organise to lift the support the trade union. More or less ended in the port, and we went in there, and we organised it back absolute back to where we were. And in fact, we just got all the members down back now with the port authority. Liverpool is unique now, in all the ways we moved away from ages you see and got to were us back into port authority.

While in the 1990s and 2000s, many dockworkers in Liverpool still worked for labour agencies,

… [They] went back with the port authority, which is pretty important, and we do a deal now. It should be finalised next week with the trade union membership – our membership. We will be getting pensions, holidays, be with the company that we are working for rather than the agency. That will be about 360 members, our members. (UK31_1 2018: item 4)

This history is essential because the dockers of Lisbon went through the same process in the 2010s. However, the creation of a new international dockers' union, the IDC, in 2000 came at the right time to challenge neoliberal practices on a European scale.

9.5.3 The Port of Lisbon Struggle on a European Scale Against "Self-Handling"

Compared to Brazil, Portugal became increasingly integrated into a larger international legal framework in the 1990s and 2000s, in this case the European Economic Zone, which later became the European Union. Many Western European ports had already been privatised in the 1980s in the wake of the European Commission's plans to deregulate transport in the early 1990s in the context of containerisation and automation (Turnbull 2000a: 368). Nevertheless, dockers often managed to maintain their working conditions and wages. The closed shop policy continued in Lisbon, while in Brazil, it was dismantled by the 1993 Port Act.

Despite the sometimes very different working conditions and structures in the ports, there was a unifying element among European dockers. The EU-wide plan of the so-called "Port Packages I-III" was a common challenge for dockers in many European and Portuguese ports, including the legalisation of self-handling (Engelhardt 2020b: 194). Self-handling means that shipping companies no longer use the port's services for piloting, towing, and especially lashing. Instead, they either use seafarers on board for this work or hire temporary employment agencies in various ports to provide this work flexibly (UK29 2018: item 51).

In particular, self-handling is strongly represented in Port Package I. It is the opposite trend to the reintegration of lashing and other operations into the port sector.[116] As shipping companies sought to reduce costs and were already paying berthing fees for their ships and catering for their crews, they turned to speedy and flexible handling (Turnbull 2000a: 339). In the 2002 draft "Directive of the European Parliament and of the Council on Market Access to Port Services" 2002/C 181 E/07, paragraph (20) states that

Self-handling should be allowed and any criteria set for self-handlers should not be stricter than those set for providers of port services for the same or a comparable kind of service.

Most of the amendments made to the Directive by various EU bodies were primarily concerned with self-handling. In the interviews with port workers, it became clear that self-handling would create a much more unsafe working environment in the port, e.g., threatening them with a metabolic rift (G3 2017: item 34; UK29 2018: item 51). The same concerns were later also highlighted in the "Reclaim Lashing" campaigns, as discussed in section 6.2.4, which in a way is a continuation of the rejection campaign against self-handling and the Port Package I-II. Across Europe, the rejection may have had similar reasons

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116 I refer to 2001/C 154 E/30 which can be read in the Official Journal of European Communities from 29 May 2001, Vol. 44, page 290ff, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:2001:154E:FULL&from=IT [Access: 18.11.2018].

as the container accidents on ships, which are widely known among dockworkers, such as the 2018 accident near the port of Dublin mentioned above. There was also a fatal accident in the winter of 2007, when Filipino seafarer Glenn Cuevas was killed by a falling container in the port of Rotterdam (Bottalico 2018: 38). He died because the crew had been instructed to release the containers before the ship docked and to self-handle (ibid.). The accident gave a new impetus to the dockers' movement in European ports to protest against the Port Package plans.

The Ports Directive also aimed to break up Europe's rigid market in port operations. The dispute over the introduction of the European Ports Directive expressed not only a conflict between European port workers and the EU, or roughly between labour and capital, but also between two different factions of capital with an economic interest in the ports. In particular, European port operators have never had the same economic power as the major shipping companies and large international port corporations such as the Port of Singapore Authority (PSA). Throughout history there has been an economic and political conflict between shipping companies and global and regional port operators (Turnbull 2000b: 28). While smaller port operators want to ensure a regular flow of operations and generate revenue linked to ships through berthing and route fees, shipowners depend on flexible port services and working hours, as sea, weather and competition cannot be timed in a flexible and globalised "door-to-door economy" (Bonacich 2009: 363).

The port operators were mainly supported by regional state apparatuses such as the Hamburg state government, which had no interest in opening up access to the port for fear of destroying the local industry of the port entrepreneurs (Engelhardt 2020b: 196). At the European level, the European Community Shipowners' Association (ECSA), the European Shippers' Council (ESC), the European Sea Ports Organisation (ESPO), and the Federation of European Private Port Operators (FEPORT) were behind the first drafts of the port directive (ibid.).

The IDC, the ITF, and the ETF played different roles in the fight against the port package (Fox-Hodess 2017: 9). The ETF followed a "logic of influence", e.g., a dialogue-oriented trade union policy towards the European employers' organisations in the transport sector (Turnbull 2000a: 340). Meanwhile the IDC developed partly in protest against what it saw as an overly bureaucratised trade union policy of the ITF and focused strongly on a "logic of membership" (Fox-Hodess 2017: 20). Despite these divergent strategies between the international and European transport union federations, there were joint strike days and actions. The threat of the Port Packages in the early 2000s, when the Ports Directive became known, led to new coalitions between rival dockers' unions, sometimes at the national level. The ITF/ETF and IDC also began to work together.

While the IDC sees itself as a grassroots union, it stresses that it no longer considers itself to be in competition with the ITF since the joint protests over the port package (UK31_1 2018: item 20). However, there is little communication with the ETF. The ITF's role during this period was, in a sense, to mediate between the two different union structures. All three confederations were forced to act as labour movements rather than state apparatuses on a European scale.

The confederations organised Europe-wide actions such as the pan-European port strike in January 2003, which involved eight hours of work stoppage. However, the pan-European strike also strengthened the bargaining position of the ETF. According to Peter Turnbull (2010: 345), it was only in 2007, for example, after the failure of the Ports Directive in the European Parliament, that FEPORT attempted to enter into dialogue with the ETF. The aim, however, was not to develop a single bargaining instrument for the European port industry, but to push back the influence of the trade unions in recruitment policy. Nevertheless, social dialogue has gradually been established, at least between the ETF, ESPO, and FEPORT, which can be seen as a democratic practice, as it has allowed for the creation of an arena for accountability. In 2008, the struggle to maintain this arena was accompanied by another threat from the ETF for a new pan-European strike (Engelhardt 2020b: 198). It was not until 2013 that the third attempt at a Europe-wide port directive was successfully voted through by the European Parliament, but this was heavily influenced by the legal arena of social dialogue in which the ETF and the IDC were involved (ibid.).

Overall, the shipping industry has been influencing the deregulation of labour in logistics for years. However, with regard to the opening up of European port operations, it initially failed to get deregulation through the European Parliament. Both the 2001 Port Package I and the 2002 amendments were rejected in the European Parliament by a narrow majority of 229 to 209 (Turnbull 2000a: 342). The same was true of Port Package Two, which no longer referred to self-handling. ESPO and FEPORT justified the deletion of this passage by arguing that it would create unnecessary social conflicts and thus an unfavourable climate for potential investors, and that this issue was better suited to the national or local level (Engelhardt 2020b: 199).

The European crisis from 2009 onwards, which followed the global crisis from 2007 onwards, created precisely this space to push through the Ports Directive at the national level.

9.5.4 The Lisbon Port Struggle on a National Scale

To give a brief idea of Portugal's situation during and after the European crisis, according to Eurostat, the measured salary in 2012 was again 25 per cent below the European average. Emigration has started to rise again, returning to the levels of the 1970s. In addition, there has been a significant decline in GDP, while the unemployment rate has risen from 7.6 per cent in 2008 to 16.2 per cent in 2013, reaching 38.1 per cent for those under 25 (Accornero 2015: 36).

At the European level, the economic crisis has increased the dominance and influence of "transnationally oriented financial and export capital" on national and European policies (Oberndorfer 2013: 135; own translation [AE]). One example is the Memorandum of Understanding (MoU) between Portugal and the Troika in May 2011 in return for bailout loans of 78 billion euros.[117] The government of the day, made up of the neoliberal Partido Social Democrata (PSD) and the conservative right-wing Centro Democrático e Partido Popular (CSD-PP), was responsible for meticulously implementing and exceeding these conditions. The conditions of the MoU included increasing the competitiveness of the ports and further differentiating between regular work, port management, and commercial tasks (European Commission 2011: 26-27). The MoU had a concrete impact on the unionised recruitment pool. The closed shop system had to disappear to increase competitiveness and allow other companies to recruit for port work.

According to a comprehensive study by Hermes Augusto Costa, Hugo Dias and José Soeiro (2014) on Portuguese labour struggles during the anti-austerity protests between 2010 and 2012, the transport and logistics sector in particular had an above-average proportion of strike days. The deregulation of such a central and militant sector came as no surprise during the Portuguese national crisis of 2012, but was necessary to undermine the growing union power in the ports. Particularly in the recruitment and training of dockers, the unions have a high degree of influence, if not decision-making power, in the port of Lisbon.

In the European Commission's eighth and ninth reports on the implementation of the Memorandum of Understanding in Portugal (2013), it becomes clear that not only temporary employment agencies are to be given access to the Portuguese port sector, but that self-handling is also to be introduced. The national port directive is to be amended to reduce port labour to a minimum and delegate most tasks to "port users" or shipping companies.

Before the European crisis, the Portuguese state had already sold the port of Sines, which had been expanded in 2004, to the international investor Port Authority of Singapore. Other terminals in Lisbon, Setúbal and other Portuguese ports were bought by the Turkish port operator Yilport Holding in 2012

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117 See for a more detailed discussion of the so-called Troika in Portugal and the MoU Engelhardt (2017a; 2017b), and Vestena (2020b; 2022).

(P33_1 2019: item 89). In the heavily unionised port of Lisbon, Yilport tried to break up the union recruitment pool through a temporary employment agency set up specifically for this purpose and legalised in the new port law of 03/2013. The new law was made possible mainly by pressure from the Troika through the Memorandum of Understanding.

However, the European crisis and the EU's response to states like Portugal also served the economic and political interests of certain groups in the affected states. Back in 2009, the Portuguese government of José Socrates was planning a similar law. At the time, dockers organised a protest in front of parliament. But the law did not disappear,

… [T]hey put the law inside the pocket. And the pocket should burn in that time, but it was already hibernating inside the desk, you know … And this new law was already … this a law that was bought in by an economic group exploiting the ports. And just try to find the right person at the right time, … the former general secretary for transport, Sérgio Monteiro. … I remember … when … the right-wing government … took it in 2012 with a new law. The first thing that the general secretary Sérgio Monteira said was: "We'll make a law here. That will be the balloon, the experimental balloon for the rest of the Euro." (P13_1 2017: items 26; 30-32)

The Portuguese economic crisis has therefore been used by port operators interested in labour flexibility and the government to increase the political responsibility for such a law. It would be much harder for workers to fight the changes made if they were forced to appeal to the European Commission instead of the Portuguese government. In this way, the new port law of 2013 was a prime example of authoritarian practice (III). At the same time, the European Union scaled down the failed Port Package I for Portugal and other states in the European periphery.

9.5.5 Fighting Precarious Exploitation Patterns in the Port of Lisbon

From 2012, dockers began to take part in protests and send out messages of solidarity with other strikes across the country. At the same time, however, they also organised themselves to fight against the new labour law and its consequences in the ports. In addition to organising their own workforce, they reached out to their families, partners, social movements, and trade unions to support them. The slogan of their campaign was plastered all over Lisbon. It read: "Precarity? Not for the dockers, nor anyone else!" (Own translation [AE]).

Working conditions also play an important role in the lives of dockers' families, sometimes leading to the active participation of family members in strikes. Due to the flexible working conditions in the port, most of the domestic work is left to the female partners, who at the same time are rarely able to do any wage work themselves, as the high overtime in the port and the long work-

ing days of up to 16 hours make it impossible for them to plan it (P09_1 2017: item 5). As a result, most female partners are largely dependent on the dockworkers' income. However, their participation in picket lines and demonstrations has not been without controversy among dockers, some of whom have preferred to strike without their wives (P11_1 2017: item 10).

As highlighted in section 6.1.2, the port sector, like other areas of work, is very much characterised by everyday consciousness, especially sexism, homophobic jokes, and hyper-masculinism. The "Panteras Rosas", the student group "Estudantes Apoiam Estivadores" (EaE) and the wives of dockers in Lisbon have contributed to partially overcoming "machismo" in the port of Lisbon, while also changing the distorted image of dockers in the media during strikes (P10_1 2017: item 4; P05 2017: item 34). Family members wrote an online blog describing their daily fears and worries of living with a dockworker. And they joined the demonstration and picket lines against precarisation.

For these two groups, the 2016 strike was also an opportunity to take their grievances to the streets in the face of declining social protests against ongoing austerity measures and strikes despite continuing precarious working conditions (P15_1 2017: item 14; P09_1 2017: item 7; P05_1 2017: item 12; P04 2017: item 2). Conversely, for example, the joint demonstration against precarious work in June 2016 and the cooperation with social alliances were necessary for the SETC union to organise broad social solidarity or "societal power".

During the second strike in 2016, the government actively tried to undermine the strike. As noted in section 3.8, despite the industrial action, dockers in Lisbon ensured the flow of perishable goods, but refused to load and unload non-time-sensitive products. However, the Portuguese government sent the police to enforce the transport of goods despite the strike. Workers had set up picket lines at the port entrances. The police organised a boat and transported workers from a temporary agency to the dock via the waterway (P13_2 2017: item 10). Using the state police to break a strike is illegal in Portugal, yet, the government alluded to this activity, to which one worker said: "This was absolutely new. I don't think many governments are remembered for doing the same shit, the same thing. But they actually did it." (P07 2017: item 12).

It was not a right-wing government that carried out this authoritarian practice (II) of undermining the workers' strike, nor was it a dictatorial regime. Instead, the strike was undermined by probably the most left-wing coalition of the PS, supported by the Left Bloc (BE), and the Portuguese Communist Party (PCP). This example shows that authoritarian practices have outlived authoritarian regimes and have re-emerged alongside neoliberal practices, such as the implementation of a precarious labour regime at the heart of a state economy.

9.5.6 International Solidarity – Upscaling of Struggles

Dockers in Lisbon organised their first significant strikes in 2014 and 2016, followed by another strike in the nearby port of Setúbal in 2018. The first strike in Lisbon lasted 38 days. It led to the dissolution of the temporary employment agency set up in 2014 with the help of the Port Directive through the MoU. Forty-seven workers who had previously worked for the agency were trained by the union and gradually integrated into the pool of permanent workers over two years. The strike required the intervention of the government and the Ministry of the Sea to mediate between the port operator and the port union, SETC. The president of the IDC union was also at the negotiating table (P13_2 2017: item 10). As the Port Packages moved to the national and regional levels, the IDC continued to pursue a "logic of membership" strategy.

In 2014 and 2016, the port workers' strike in Portugal was supported by two-hour port strikes across Europe, organised by the IDC. This action increased the pressure on the port operator, Yilport. It came, among others, from large shipping companies such as Maersk, which were affected by the regional dispute (P07 2017: item 8). After several hours of negotiations with the Portuguese government, the port operator Yilport finally agreed to end the temporary work in the port of Lisbon. At the time, the only step backwards for the workers was the freezing of the planned wage increase to end flexible working conditions in the port of Lisbon. The dockers in Lisbon exchanged the wage increase for the integration of 47 temporary workers into the permanent workforce, improving their health and safety.

The success of these two strikes was a springboard for the Lisbon dockers' union, SETC, to merge with nine other dockers' unions across the country to form SEAL. The new union would also be able to challenge working conditions in the other nine ports.

In the autumn of 2017, at least in the two ports of Setúbal and Figueira Da Foz, the union secured the same collective agreement that it had won in Lisbon a year earlier. In Setúbal, however, the company Yilport refused to implement the new collective agreement, leading to a strike in November 2018. This was probably the first prolonged strike in the port of Setúbal. Dockers from Lisbon intervened in the strike and supported the negotiation process.

Dockers in Setúbal have been working on daily contracts since the 1990s (P34_3 2019: item 2). The new CBA would force the employer to integrate them into a regular workforce and allow the workers to set up a health and safety committee and access holidays and other benefits (P35 2019: item 6). As the only Volkswagen terminal in Portugal, the port is economically vital. During the strike, the port authority in Setúbal hired untrained workers to handle the Volkswagen vehicles. The dockers tried to prevent the subcontracted workers from entering the port and crossing the picket line. Again, the left-

liberal government allowed the police to intervene and force them to break the strike.

The police established an area where we dockers could not … enter that when the bus came with those 30 workers to load the ship [we] could enter the port … And when it started, people started moving, their blood started boiling, and they stormed the street. And they just did it. "You're going to pay; what are you doing? We also have a family!" And the police didn't take any action like beating or anything. The police stayed calm, and we also didn't react against the police; we didn't respond against the bus. There was a time when we all sat down and sat on the ground as a form of protest. And that's the police who reacted all that revolt with the intervention police. It was positive in that sense because it showed a huge dimension of a huge escalation of the conflict because it wasn't just workers against each other it was the intervention police (P33_1 2019: item 65; own translation [AE]).

Instead of standing up to the police and the contractors, the dockers from Setúbal and Lisbon who supported the strike sat on the floor and were taken to the police station one by one. When the "scab ship", which was loaded because of this authoritarian practice (II), left Portugal to go to Emden in Germany, the dockers organised a solidarity campaign with the ver.di port workers and the ITF. The dockworkers in the German port of Emden organised an extraordinary workers' meeting, which delayed the unloading of the ship for about two to three hours. Again, the struggle was escalated with the help of transnational trade union structures. And it was successful: out of about 100 workers, 56 were given permanent contracts immediately and the rest within a year.

Between 2014 and 2018, SEAL aimed to fight precarious work in the port of Lisbon and extend the struggle to other ports. The union set up the first Health and Safety Commission and visited ports to investigate working conditions and labour law violations.

Meanwhile, in an attempt to extend the port struggle nationally, the SEAL union has come up against strong anti-union policies in Sines and Leixões, the port near the northern Portuguese city of Porto. Here, PSA and Yilport have launched union-busting campaigns, including assigning workers who have registered as IDC/SEAL members to night shifts only or subjecting them to consecutive daily drug tests (P19 2017; P24 2017).

9.5.7 Aviation Workers in Portugal against Subcontracting

Compared to the other three chokepoints studied in this thesis, it is impossible to find a reconstruction of the history of aviation workers and their struggles in Portugal. I am grateful that, as in the previous sections, I have been able to reconstruct the history through the pamphlets and documents from the archives of three interviewees and informants. The documents I used are listed in Appendix 3, according to the collective of authors, the name of the series of leaflets, the date and the title of the paragraph(s) to which I refer.

In sections 9.3.5 and 9.3.6 I pointed out how well organised airport workers were in Lisbon and the role of workers in nationalising the airline TAP and fighting for a collective agreement. In the 1980s, many of the concessions won by workers during the revolution were gradually rolled back. However, in 1982 and 1988, workers in Portugal organised two general strikes to fight against further outsourcing and for higher wages. TAP workers also took part in these strikes (LC 14.03.1988). Compared to the revolution and the movements of the aviation workers in Brazil, the struggles of the aviation workers in Portugal in the 1980s were not as broad and militant. Their strength diminished due to the increase in precarious and subcontracted workers at TAP (LC 09.11.1987). In 1987, there were 2,000 permanent workers and 1,300 precarious subcontracted workers at TAP. Their working conditions created a spatial conflict in their Social Reproduction Metabolism in terms of commuting and the distance to dormitories and homes.

In 1987, TAP increased its flights by 14 per cent (LC 22.06.1987). But instead of hiring more workers, the company forced them to work overtime. One cabin attendant was reported to have worked 18 hours on flights before being allowed to rest (LC 15.09.1987). In 1987, Versus reported (LC 30.03.1987; own translation [AE]):

It is becoming common to see TAP workers hired by contractors, on a fixed-term or contract basis, who work until late at night, and then sleep for a few hours on a bench, only to pick up again at dawn. The situation is inhumane for the subcontractors, but it is also unacceptable for those of us who have a permanent job.

In a second statement, Versus (LC 09.06.1987; own translation [AE]) discusses in more detail the reasons why subcontracted airport workers were sleeping on benches:

One female worker clocked in as follows: First day: 11.25 am-1.30 pm, then 6.30 pm-2 pm; second day: 7 am-2 pm. That means a 5-hour break to go home, sleep and return to the airport with a clean face – not to mention meals! And she worked 12 consecutive days.

At the same time, the state bus company, Carris was ordered by a government decree to stop operating at night. TAP workers on night shifts at the airport could not go home at the end of their shift or had to take a taxi, which was much more expensive and effectively a wage cut (LC 26.10.1987). In the late 1980s, however, airport workers began to fight against precarious contracts. According to Versus (LC 28.02.1989), they organised at least one strike in February 1989. As a result of the struggle, SITAVA and other unions integrated subcontracted workers into the regular workforce. They succeeded in ending subcontracting at TAP, at least for the time being.

The aviation union landscape remained fragmented into many different unions. As with the dockers, the main aviation union, SITAVA, remained inde-

pendent of the two main union confederations, CGTP-IN and UGT.[118] Despite these many organisations, they won a collective agreement for all TAP workers in the early 1990s (P21_3 2017: item 56). At the same time, Portugal's economic instability remained grave. TAP made redundancies at a time when unemployment in Portugal was already high. In October 1993, Ana Sousa Dias (Público 17.10.1993) published a documentary in Público in which she described the effects of threatened redundancies in several large companies, including TAP. Those interviewed reported psychological crises, drug abuse, anti-depressants, and suicides.

In 1995, the union SITAVA published a draft CBA for all aviation workers. It called for the introduction of the 35-hour week and a reduction in night work (SITAVA 1995: 6-7).

9.5.8 Open Skies in the European Union and the Impact on TAP

As in the Portuguese port sector, working conditions were influenced by national labour legislation, but also by the European scale. While the Port Packages were drafted and negotiated at the end of the 1990s, the liberalisation of European airspace, or neoliberal practices in relation to airport and airline labour, was already being discussed in the 1980s. The first of three Open Skies packages was introduced in 1987 to attract foreign airlines and investment (Bosch/García-Montalvo 2003: 6). The Open Skies agreements allowed low-cost airlines to expand their markets and fly domestic routes in foreign countries. Other aspects of low-cost airlines and their racialised labour regime, which parallels the FOC, have been discussed in section 6.5.1. The deregulation of airline markets has had its own impact on airport labour.

However, it was not only the skies that were opened up, but also the ground. In 1996, the European Commission adopted Council Directive 96/67/EC, which allowed third-party and self-handling by airlines at all major airports in the European Union.[119] This includes baggage, ramp, fuel, oil, and maintenance (Harvey/Turnbull 2015: 312). According to Seligson, only about six to eight per cent of ground workers in the EU's aviation system today have permanent contracts. Furthermore, he states:

Other working arrangements, such as agency work, self-employment, posted workers and zero hours contracts, are also found in air transport in the European Union. (Seligson 2019: 7)

Under these conditions, the self-organisation of airport workers was severely weakened. Despite SITAVA's initial attempts to fight precarious subcontracted

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118 For an overview of the trade union landscape and the establishment of social partnership in Portugal, see Hermes Costa (1994).
119 Airports must be able to handle at least two million passengers or 50,000 tons of freight (Bosch/García-Montalvo 2003).

working conditions at the airport, the European Commission's "Open Grounds" directive has intensified their struggle, making it more difficult for workers at all airports to address further grievances. It can, therefore, be considered an authoritarian practice (III). As a result of the directive, the ground handling company ANA was privatised in 2008.

After the economic crisis between 2010 and 2014, Portugal transformed its tourism sector into an important economic asset, using AirBnB platforms (which led to large-scale evictions and gentrification in Portuguese city centres) and other formats to improve its international attractiveness for tourism. Meanwhile, the Brazilian airline Azul, one of Latin America's largest low-cost carriers, became the main owner of TAP between 2015 and 2020.[120] TAP has oscillated between full privatisation in 2015 and partial renationalisation in 2016 and 2020, with a current government bond ratio of 72.5 per cent.

This race to the bottom in labour standards among low-cost carriers increases the pressure on national flagship airlines to compete on the backs of airport and cabin crew workers' organisations. TAP, despite its semi-privatisation-renationalisation process, still guarantees better working conditions for cabin crew workers than, for example, Ryanair in Portugal (P12_1 2017: item 14). A key difference is the employment contract; TAP cabin crew workers remain covered by a collective agreement, while Ryanair's employment is outsourced to the Irish company Crewlink, which is not obliged to comply with Portuguese labour standards.

9.5.9 The Struggle for Keeping TAP Public

For many workers, TAP is seen as part of national sovereignty and a public company, a legacy of the Portuguese Revolution of 1974/75. When privatisation loomed in 2014, the TAP workers and affiliated unions were therefore able to create a public social movement to support their struggle (P15_1 2017: item 36).[121]

Like the dockworkers' strike, the sectoral dispute also attracted activists from the social movements against austerity, which peaked in mid-2013. The announcement of the planned privatisation of TAP by the right-wing government of Passos Coelho in 2014 mobilised these forces again, but at a sectoral level (P25 2017: item 34). By the end of November 2014, TAP workers were holding regular meetings and planning to organise a strike over the Christmas period (P16_1 2017: item 58). However, the centre-right government applied

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120 See Orban, André (2020). Portugal re-nationalises TAP Air Portugal. Aviation24, https://www.aviation24.be/airlines/tap-portugal/portugal-re-nationalises-tap-air-portugal/ [Access: 07.09.2020].

121 The privatisation of TAP airline was planned since the 1990s but was never implemented due to a lack of private investors, a concept, and the resistance of workers (Almeida Correira 2021).

the strike law "requisição civil", which declared air transport during Christmas to be of greater social interest than the strike (P16_1 2017: item 35). In this way, the government applied authoritarian practice (II).

The "requisição civil" was introduced in 1974 as Decreto-Lei n.º 637/1974[122] during the first six months of the revolutionary period. It was a quasi-military law that sought to take control of strategic infrastructures and companies for the benefit of the working class. As the European crisis loomed in 2009, the PS government introduced a new labour law that changed the meaning of the "requisição civil" into a law restricting the right to strike:

Law No. 7/2009 of the Labour Code provides for the possibility of civil requisition in the event of failure to provide minimum services during a strike. In the case of an enterprise whose activity is intended to meet unforeseeable social needs, it is the responsibility of the trade union confederation that has declared the strike and the workers who have joined it to ensure that minimum services are provided during the strike.[123] (own translation [AE])

In this case, a strike would have been considered a crime, leading to dismissals and even imprisonment. A powerful strike against the privatisation process over Christmas 2014 was therefore called off. Nevertheless, a ten-day pilots' strike and demonstrations in favour of keeping the airline public were launched in January 2015 (P16_1 2017: item 58).

In order to link the former activists of the anti-austerity movement and the trade unions of TAP, their joint assemblies decided to create the association "Não TAPem os olhos", in English "Don't blind your eyes" (P12_1 2017: item 48). It was a movement without official party participation, but it was able to moderate discussions with the government, launch a website, and visualise the struggle (ibid.). Portugal's specificity as a state with a large migrant population and a militant history in the public and transport sectors allowed TAP workers to take their struggle against privatisation from their industry to the national level. As one activist put it (ibid. item 58):

So, every time they try to hurt TAP, it's like they are trying to hurt something of me as [a] Portuguese. And because we are people that are immigrants, we need to fly out of Portugal. TAP is very important for us. … Portuguese people always fly or get out of Portugal.

After the general election in October 2015, right-wing and conservative forces won the most votes, but still had to form a minority government. The government initiated a quick sell-out to the Azul group to ensure that TAP would still be sold at 100 per cent.

However, this minority government was constantly overruled by a majority of centre-left parties. After eleven days and the failure to fully privatise TAP, the centre-right government resigned, and a new centre-left minority govern-

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122 For original text see: https://diariodarepublica.pt/dr/detalhe/decreto-lei/ 637-1974-466053 [Access: 26.07.2023].
123 For original text see: https://diariodarepublica.pt/dr/legislacao-consolidada/lei/ 2009-34546475-51509275 [Access: 26.07.2023].

ment came to power in early 2016 (P23 2017: item 38). This new government, led by António Costa of the Socialist Party (PS), was under pressure from strong anti-austerity protests and the high disappointment of the 40 per cent of voters who abstained or spoiled their vote. This pressure was often underlined by industrial struggles, such as on the side of dock workers (see also section 9.5.5), teachers, nurses, civil servants and flight attendants, who forced the government to change the compulsory working week from 40 to 35 hours, as it had been before the economic crisis (Engelhardt 2017b: 433). This new government resisted the total sell-off of TAP and bought back the majority of shares (51 per cent) to retain control of the airline (ibid.).

In 2021, the government, still under the PS, fully renationalised the airline and launched a €1.2 billion bailout programme to save it from bankruptcy. Passenger traffic at Lisbon's central airport alone will double between 2012 and 2019.[124] With the advent of low-cost airlines and the increase in the number of flights, the proportion of elderly people and people with special needs has increased significantly, posing a further challenge to cabin crew and airport staff in general, as discussed in section 6.4.5.

TAP used more aircraft and addressed more specific passenger needs and tasks, but as one interviewee pointed out, the company refused to hire more crew.

TAP was trying to get down the number of people necessary to work in aircraft. Nowadays, we are with a minimum of, for instance, in the A330, minimum of nine crew members; they are trying to make eight. But with eight, you don't give customer service to the passenger … So, if they don't employ more people, they have less crew members to be available to make the flight. (P12_1 2017: item 20)

The company wanted to expand and increase its market share without incurring additional labour costs, following a strategy of pitting passengers against cabin crew. In 2017, cabin crew workers refused additional services on board in protest against TAP's employment policies. Cabin crew workers felt the mental pressure of refusing to do more than secure the flight.

… [I]t's very difficult to come in and say: 'I don't make any service on board, I am going to just sit here on my bench and don't do anything for four hours, no water, no anything.' They were trying to make [a] psychological impact on the crew members for us to give up and make the service. (P12_1 2017: item 22)

The individual pressure of worsening working conditions and services was turned into a collective struggle of the cabin crew workers against vacancies and the attempt to increase the workload. This strategy of refusing services and withstanding the psychological pressure from passengers and managers allowed the TAP cabin crew workers to succeed, at least temporarily: From

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124 In 2012, about 15.3 million departures and arrivals were registered. In 2019, about 31.2 million passenger flights were registered (Anuário Estatístico Operacional 2010; 2015; 2018; Instituto Nacional de Estatistica 2006-2019).

2018, TAP management promised to hire more cabin crew to fill the estimated 500 vacancies by 2020 (P12_1 2017: item 24). This physical struggle at TAP was important because it encouraged cabin crew workers in other airlines operating in Portugal to resist low working conditions. It was the struggle that set the strategy for Ryanair workers to fight for similar improvements in conditions. The cabin crew union SNPVAC knew that it had to fight precariousness in LFAs in order to maintain and improve working conditions in the flag carriers and to stop the race to the bottom in the dismantling of decent work.

9.6 Conclusion on State, Struggles, and Chokepoints

In summary, if we look at labour rights in the authoritarian period, we see that the restrictions were mainly aimed at the right to challenge working conditions and wages by limiting the right to strike, or to organise in independent democratic trade union structures. At the same time, until the 1970s and 1980s, authoritarian states guaranteed a tighter temporal and spatial restriction on the exploitation of workers. In the current period, which is referred to here as Authoritarian Neoliberalism, labour law has become a two-way street: On the one hand, the tug-of-war over space and time is decided on the side of the capitalists: Reproductive time spent in the workplace itself to change uniforms, take breaks, and rest, including breaks to consume food and water, or use the toilet, is excluded from paid working time in Brazil by the 2017 labour reform. In Portugal, airport workers remain in precarious subcontracting conditions, and dockers are challenging the 2013 port law that allows subcontracting. Although workers have more democratic rights on paper, there are various authoritarian practices that undermine access to these rights.

In the history of the chokepoints in Brazil and Portugal, it was clear that space and scale are factors in workers' strategies. As Portugal's economic space is small for ports and aviation, workers sought to raise their struggles to an international scale and trade union strategy. In the port sector, workers joined forces with the IDC to organise solidarity strikes to fight against precariousness in the port and to protest against a threatening metabolic rift, by integrating more workers into the labour pool and being able to reduce overtime. In aviation, Ryanair workers, inspired by the national strategy of TAP workers to fight for more staff in the company, launched a strike and international struggle against Ryanair, which they would have lost without the support of the ETF, the ITF, and national unions in Belgium, Germany, and other states.

In Brazil, the labour movement is still very much isolated within the national framework. Given the colonial legacy of the state, which is large and has an extractivist infrastructure, dockers and aeronauts still have great influence in organising strikes, being able to challenge attacks on their Social Reproduc-

tion Metabolism without having to take their struggle international. For airport workers, however, the situation remains precarious. However, the current post-pandemic crisis in air transport and the shortage of staff at airports could lead to a new upsurge in airport struggles in tourism-dependent countries with large diasporas, such as Portugal and Brazil.

10. Conclusion

Initially, the book was inspired by a painting by the Argentinian painter Quinquela Martín, born in 1890. He became famous for his paintings of the port of Buenos Aires Boca (English for mouth or estuary). His canvases were made from the fabric of old sails. His colours were remnants of the varnishes applied to ships and boats.[125] Many of his images show different versions of Boca before and during industrialisation, a time when there were steel ships, but the ports had not yet been rebuilt to allow them to dock properly. It was a time when the infrastructures of colonial capitalism and industrial imperialism collided. The steel ships had to be anchored in the bay. Dockers used boats to pull them as close to the shore as possible. Then they laid planks from the boats to the ship and the shore, balancing the ship cargo out and then the new cargo in. The planks are thin, and the workers have no hands free to balance or catch themselves if they fall. What happens when the planks slip during storms and rain? How can a system be so fragile and dangerous and still work?

In recent years, the fragility of global supply chains has also been highlighted. During the Covid-19 pandemic, ports and airports around the world were closed; ships drifted aimlessly at sea for months. In March 2021, the container ship "Ever Given" blocked the Suez Canal, turning and digging its bow and stern into opposite shores. It was flying a Panamanian flag but belonged to a subsidiary of the Schulte Group in Hamburg, Germany. It was manned by an Indian crew. The blockade caused a traffic jam of ships and a delay of goods, costing billions of dollars. In February 2022, the Russia-Ukraine war began, leaving dozens of ships with over a thousand sailors trapped in the Black Sea for months, some at risk of being hit by mines and bombs. When the airspace over Russia was closed, airlines had to find new routes to maintain global passenger traffic. In the summer of 2022, critical transport routes such as the Rhine in Germany or the Po in Italy dried up. By the summer of 2023, the Panama Canal was in danger of becoming unusable for shipping due to excessive drought. On a larger global scale, the fragility of the 1920s port of Boca, with its thin planks and lack of fortified banks, is mirrored in today's supply chain and multiple capitalist crises. How can a system be so fragile and dangerous and still work?

The Social Reproduction Metabolism under capitalism is a power struggle. Workers can only survive if they are willing to balance the planks, climb the spreaders, and board container ships without safety precautions. If they survive, they receive money to provide housing, food, clothing, health care, and education for their children. If they are unwilling to expose themselves to these dangers, they lose their income. Our bodies are fundamentally dependent on

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125 See, for instance, Museo das Bellas Artes, Buenos Aires, https://www.bellasartes.gob.ar/coleccion/obra/8823/ [Access: 23.03.2025].

our ability to eat and sleep. This materiality of our existence and that of the people who make up the working class is exploited by corporations under capitalism. Under the condition of the exchange of productive labour, working people secure access to their social reproduction every day anew. Without this coerced relationship of exchange, global supply chains would collapse.

In this dissertation, I began by discussing the chokepoints of global supply chains, which in the literature on industrial relations, labour geography, and critical political economy have been seen either as "magic bullets" for class struggle or as spaces of "hyper-surveillance" by states and corporations. In my fieldwork, I aimed to collect the voices of workers who spend their time at chokepoints and to understand their views. In this way, I arrived at a different understanding of chokepoints as spaces that threaten the Social Reproduction Metabolism of workers with a metabolic rift.

However, I did not give up the idea that chokepoints might still have a specific role to play in workers' struggles against precarity. Nevertheless, I became more cautious in my approach to the issue, which is how I formulated the main research questions for the book:

1) If workers and activists can exercise logistical power through chokepoints (ports and airports), why are there still precarious working conditions?

2) How does the restructuring of work at chokepoints, through surveillance, regulation, laws, legislation, and directives, affect workers' bodies?

3) How do trade unions and social movements address authoritarian practices and restrictions on workers' social reproduction and develop strategies for (re)gaining decent jobs at chokepoints?

Since writing is only possible in a linear way, even though I am dealing with multidimensional and reciprocal processes and dynamics, I had to decide for a linear way of presentation, which deviates from a standard thesis structure, where a theoretical part is at the beginning and a second part deals with empirical findings and analyses. Instead, my thesis contains three main themes: Logistics, Body/Social Reproduction Metabolism, and State, each of which includes theoretical considerations, operationalisation parameters, and empirical discussions. In the three parts, I aim to answer the three research questions above, using sub-questions to deepen my understanding.

10.1 Part One: Logistics

The sub-questions of the first part were: Why does capitalist transport require a constant increase in speed? Why can the capitalist mode of production and capital circulation not eliminate chokepoints and ensure a seamless flow of capital? How is this reflected in the four chokepoints chosen for this thesis?

To understand the nature of chokepoints and why they exist in capitalism, I have zoomed in from the capitalist whole to the logistics infrastructures, which are the blood vessels of global capital, meaning that any chokepoint in them can damage the capitalist social whole, or at least parts of it. Supply chains are fragile and vulnerable, especially at hubs where intermodal transport slows down the flow of goods, including passenger transport. To understand the nature of chokepoints, I used Marx's concepts of the use value of the commodity, transport as a commodity and a site of production, turnover time and storage, and fixed and circulating capital.

Answering the sub-questions: Logistics must be speeded up because, from a Marxist point of view, the nature of certain commodities, especially perishables, and the extension of distances between places of production and markets demand rapid connection. New spaces need to be opened up, and previously uncommodifiable products need to reach new markets around the world. Accelerated logistics also reduces the need to store goods to ensure the flow of potentially disrupted value chains. Storage costs could, therefore, fall. Speed in transport also speeds up the overall turnover time of a commodity, from its manufacture to its point of sale and final consumption.

Capitalism could not erase the chokepoints because these nodes were not built in the air but on the material geographical reality in different global spaces. Through the entangled spatial history of the four Portuguese and Brazilian chokepoints, I explored the need for space in an extractive feudal society such as Portugal in the 15th century. It needed space to overcome its limitations in terms of soil fertility and land, and with the colonisation of Brazil, it gained access to vast, indigestible spaces in order to continue its extractivist endeavours. In this way, the colonial "reservoirs of power" for (former) European imperialist states were made up of infrastructures suitable for the extraction of primary commodities but unsuitable for connecting and controlling the vast territories. This led to a concentration of commodity and passenger transport routes in a few coastal hubs, spatially congested and limited for economic growth. In the imperialist north, states also concentrated commodity flows, first in the feudal centres of the (Portuguese) empire, and later in the hub-and-spoke transport systems that reduced costs by having commodities travel together for as long as possible before splitting up at a port or airport for smaller and more distant destinations. As noted above, chokepoints are spaces where capital accumulation constantly collides with its spatially memorised past.

This is reflected in the chokepoints discussed in the thesis, mainly along the phenomena of congestion, conflicts over the construction of new airport runways, new routes, lack of investment, accidents, and labour struggles over health and safety. This first part of the thesis (Chapters 3-4), therefore, functions as a contextualisation of chokepoints and the spatially embedded and intertwined histories of the two countries, Brazil and Portugal.

10.2 Part Two: The Body and Social Reproduction Metabolism

In the second part of the thesis, I aimed to directly shed light on the first main research question of why workers in chokepoints do not have access to the "logistical power" to fight for decent jobs and against precarity. The following sub-questions were posed: Why and how is the division of labour at chokepoints gendered and racialised, and how does this affect the exploitation of bodies on the one hand and collective struggle on the other?

At the beginning of chapter 5, I started with a literature review of transport labour studies from industrial relations and the missing concept of the labouring body and social reproduction, and then introduced Social Reproduction Theory and the "making of the labouring body" from a class position, exploitation, a temporal, and a spatial dimension. In this way, I sought to examine the processes that create and shape the labouring body throughout the history of capitalism and workers' lives.

During the fieldwork I observed different kinds of gendered and racialised segregation in both industrial areas, aviation and dock work. I wondered about how they divided the working class at chokepoints in its struggles or were still a factor in struggles. Since I see racial and gender divisions, and oppressions as strongly linked to space, I decided to introduce the idea of exploitation patterns to highlight the role of such segregation and spatial exclusivity in the workplace. I looked at racialised and gendered exploitation patterns in and between maritime and air transport.

The second part of the thesis also aimed to understand the consequences of exploitation at chokepoints and why workers in my interviews emphasised occupational health and safety so much. Therefore, in Chapter 5, I combined Social Reproduction Theory (SRT) with an ecological Marxist lens through the concept of the metabolic rift between capitalist exploitation and nature. I used the texts of John Bellamy Foster and Jason Moore and their ideas, along with a Marxist-Feminist understanding of social reproduction as a metabolism. In this way, I showed how I understand the labouring body as an agent and structure of processes. I outlined the risks of metabolic rift for the labouring bodies of workers and the structural acceptance and calculation of death in capitalism.

Staying with the idea of exploitation patterns in the workplace, I have added precarious exploitation patterns to the analysis of workplaces in chokepoints. These are less marked by racial and gender divisions and segregation. They certainly play a role here, but more in increasing the constant threat of a metabolic rift in the Social Reproduction Metabolism of workers. As the capitalists seek to extend the working day and occupy every part of the space at the congested chokepoints for themselves, the Social Reproduction Metabolism is

shaped by spatial and temporal conflicts in which capital and labour seem to enter into a tug-of-war over re/productive time and space.

I also pointed out that exploitation patterns are conflated in workplaces, creating a messy matrix for everyday work. The advantage of looking at them separately is that it promotes a clearer understanding of the power relations at play in specific struggles and conflicts.

In answering the two sub-questions and the first main question, the second part of the book on the body and Social Reproduction Metabolism (Chapters 5-7) concludes that the division and segregation of labour along racialised and gendered power relations developed throughout the history of transport and capitalism. I argue that the primitive accumulation of capital on a global scale would not have been possible without the racialised workers from West African areas who piloted the ships along the coasts of Latin America, were porters, or worked in the vast fields to transport and produce primary commodities. These racialised divisions of labour re-emerge in international transport, as pointed out in relation to the FOC labour regime in maritime transport and the LFA labour regimes in aviation.

At the international level, transport union members from the Global North still tend to slip into cultural othering when asked why, for example, women are prevented from lashing themselves in Brazil, rather than reflecting on their own trade union and labour organising history, such as the ILO's Lifting Regulation, which entails contradictory statements about gender relations. Port workers in Brazil and Portugal also tend to use an essentialisation of their culture to explain, for example, the macho behaviour of colleagues. However, the extent to which racialisation becomes an obstacle to organising and fighting precarious work at chokepoints depends on the spatial and historical differences between the countries where the chokepoints are located.

Because Brazil is a large country with a weak transport infrastructure left over from its colonial past, mainly white aeronauts do not rely on other categories or sectors to fight for their health and safety at work and for social reproduction. In the past, however, they have been part of more significant movements against the authoritarian practices of the Brazilian state and governments, which attacked workers' right to strike and working conditions. Along with Brazilian dockers, they have been one of the leading forces in building trade union federations and fighting for labour laws and political accountability. Dockers have a long history of overcoming racial divisions, dating back to the late 19th century when precarious black workers were pitted against white European migrant workers in the port. Over the decades, dockers in Santos have developed joint struggles against their common opponents.

The exclusive struggle of the predominantly white aeronauts in 2016 and 2017, with its divergent successes against the devastating labour reform, demonstrated their overall logistical power and ability to access it. However, their refusal to use it for the broader labour movement to challenge the labour

reform for the rest of Brazilian workers, including airport workers, weakened logistical power as a "magic bullet" for all. Similarly, the dockers in Brazil participated in the protests and general strike against the labour reform while fighting to maintain their own Social Reproduction Metabolism. They shared their potential logistical power with the broader workers' movement, which is weaker than that of the aeronauts.

As a small state on the periphery of Europe, the Portuguese labour movement does not have the same logistical power as Brazil because of its structural colonial legacy. Instead, dockers have had to organise transnational trade union structures with the IDC and link up with the ITF to put pressure on their government and the port industry, and to fight precarious contracts and subcontractors in the ports. Several dockers affirmed that without the international solidarity strikes coordinated by the IDC, the struggles would have been lost. Logistical power is not separate from space and only builds up through the joint efforts of workers in many different sectors to combine their strike activities. This aspect of logistical power as a collective force across racialised patterns and in solidarity with racialised precarious seafarers was visible in the anti-port package protests between 2000 and 2013 and the Reclaim Lashing campaign between 2015 and 2020.

The same is true of the airline industry in Portugal. The racialised Portuguese cabin crew workers did not have access to logistical power on their own to fight against the transnational company Ryanair. They were only able to challenge the LFA industry by turning to the ITF.

In this way, racialised exploitation patterns and their entanglement with precarious work, including their impact on health and safety, lead to more fierce campaigns to protect the Social Reproduction Metabolism than in historically grown spaces where the logistical power of chokepoints can be more easily accessed by an independent sector within a nation.

Similar to racialised segregation in the transport sectors studied in this thesis, there are gendered segregations with particular characteristics. I observed a solid but porous "protest masculinity" exploitation pattern in both ports, Santos and Lisbon. Rather than seeing it as a normative concern, I explored the role that hyper-masculinity, sexism, violence, and drug abuse play in the functioning of this fragile industry. Analysing the statements of the interviewees, I argue that the masculinist exploitation patterns in the ports express lost battles in a dangerous workplace characterised by strong patriarchal family ties, where each worker supports and protects the other. At the same time, it prevents workers from addressing health and safety issues, stress, depression, deviations from patriarchal gender norms, and so on. For the media campaigns against dock strikes, the image of a wild, masculinist animal even helps to disorganise attempts at solidarity. This is why dockers in Lisbon linked up with LGBTQI* and feminist groups in order to get support, and, in this way, also reflect their own thought collectives and ideas. In Santos, such movements did not develop,

and the dockers went on strike alone but occasionally supported other strikes and activities. The lack of reflection on this masculinist exploitation pattern also affects female dockers, who in Santos reported harassment, while in Portugal hyper-masculinism is reproduced through overwork.

The airport and aviation sector revealed feminised exploitation patterns, exposing precarious feminised workers and their bodies to patriarchal and capitalist notions of care work. Female workers expressed being excluded from "all worlds" as their work is organised through subcontractors on part-time and temporary contracts. In Portugal, the challenge of being seen by trade unions and included in meetings by offering childcare and family-friendly meeting times was expressed.

None of these exploitation patterns are static; they are porous and dependent on the development of class struggles and power relations. Gendered and racialised exploitation patterns naturalise and standardise bodily and extrabodily characteristics and contribute to the over-exploitation and disorganisation of workers at the chokepoints, while at the same time being addressed and challenged by workers.

Apart from being racialised and gendered, Transport workers are often exposed to precarious working conditions. Precarious work is understood here not only as temporary contracts, low wages, or part-time work, but also as endangering the Social Reproduction Metabolism of workers through accidents, illness, and death. Transport workers died while producing, maintaining, and moving goods and other workers and passengers. Masculinist and feminine exploitation patterns and the normative ways in which workers are essentialised through these specific gendered characteristics have obscured the violence that transport workers face at chokepoints.

By uncovering this violence, the sections on precarious exploitation patterns address the second sub-question: how exploitation affects the bodies of workers at the chokepoints. To this end, I have explored and rethought the concept of the metabolic rift as a way of understanding the interconnectedness of the productive and reproductive spheres. My analysis is that precarious exploitation patterns are characterised by a constant threat of breaking this metabolism in which the worker produces and reproduces. I decided to explore this tug-of-war in two ways: as temporal and spatial conflicts.

In terms of temporal conflicts, I narrowed down the port workers' interview statements to temporal autonomy, overtime, and training time. The temporal conflict over temporal autonomy was evident in the Santos workers' struggles in the neoliberal period, when the government sought to control the port labour regime. In Lisbon, this regime is already closely monitored, leaving workers with little freedom to decide how to share tasks and shifts among themselves. Since autonomy is very low in Lisbon and still contested, but higher in Brazil, I argue that this could be one of the main reasons why the number of (fatal) accidents is higher in Lisbon than in Santos. In addition, dockers in Lisbon are

faced with longer shifts and more overtime, leading to higher levels of chronic fatigue and absenteeism. The Lisbon dockers' fight to integrate precarious workers into their permanent pool was, therefore, not only an act of solidarity among these workers, but also an attempt to reduce the amount of overtime per worker in the port and, at the same time, to reduce the accident rate.

The struggle for decent training time is also a temporal conflict between dockers in Santos and Lisbon and their companies and governments. While in Santos, the workers are trained in a school, in Lisbon, the government changed the labour law so that it was no longer compulsory to be a dockworker. This change in the port labour law and the legalisation of temporary employment agencies in the ports led to the first wave of dockworkers' strikes between 2012 and 2018, in which the law was not repealed, but the attempts to enforce it were.

In airports, temporary contracts are an important issue for workers with unstable schedules who move in and out of airport work on a seasonal basis. (Lack of) training time is therefore equally important and has been raised by workers as a health and safety concern. A lack of proper training and rapid turnover of workers also leads to situations where untrained workers are forced to perform tasks for which they are not prepared, putting them in situations where they may damage equipment or, worse, other workers and passengers.

In terms of spatial struggles, workers in all four of the chokepoints studied mentioned the lack of maintenance of equipment and infrastructure, and the lack of safety precautions. In particular, poor and old machinery was mentioned in both sectors. The second spatial conflict relates to distances and access to changing and rest rooms, as well as dormitories or homes. Workers in all four logistical hubs mentioned experiences where they or their colleagues had spent the night either on the bench at the airport, in the cabin of an aeroplane, in the hull of a ship, or a car in order to get to the next shift on time. Because of the distances involved, this problem seems to have been raised more often by Brazilian workers in the ports. Now, the problem may have been worsened by the fact that any reproductive work in the workplace, such as showering, changing clothes and training, is no longer counted as working time. This law does not apply to aeronauts in Brazil, and they have improved their access to reproductive tasks during work. However, this improvement has not been implemented for airport workers in Brazil and, like airport workers in Portugal, they have raised the lack of adequate time to access adequate sleep and rest facilities (adequate for all genders).

A concern that I side-lined in the thesis is the impact of climate change on the Social Reproduction Metabolism of workers, especially floods and heat waves. Water breaks, adequate rest periods, and decent protective gear are the least that would support workers during a growing climate crisis and weather extremes.

10.3 Part Three: The State and Authoritarian Practices

In the third part of the thesis (Chapter 8-9), I aimed to answer the second and third main research questions, which concerned the restructuring of work at chokepoints through surveillance, regulation, laws, legislation, and directives, and how these affect workers' bodies and how trade unions and social movements fight precarity despite different authoritarian practices. The sub-questions accompany the questions on how the state regulates the temporal and spatial conflicts in maintaining the Social Reproduction Metabolism of the workers and how it channels and limits the resistance of the workers at the chokepoints.

I began the third part by discussing the need for a materialist theory of the state to analyse labour struggles in the capitalist state, which had already been highlighted by Nicos Poulantzas in his analysis of the Portuguese, Spanish, and Greek dictatorships. The state and its institutions play a violent role in maintaining the operation of global logistical supply chains, despite their apparent fragility. States are unequally placed in the global economic order and, on behalf of the imperialist chain, Brazil and Portugal differ in their strategies to develop and maintain their positions in the global world order at a rather peripheral stage.

In both countries, authoritarian regimes remained in power for a long time and engaged in illiberal practices such as banning strikes, imprisoning and torturing trade unionists, or forcing them into exile. In both countries, democratic transformations took place in the mid-1970s (Portugal) and mid-1980s (Brazil), achieved mainly by labour and social movement activists. After these transitions to democratic parliamentarism in Portugal and Brazil, the struggle for democratic rights, such as the right to strike and labour laws that guarantee decent working conditions, did not end. Instead, driven by the global economic crisis since 2007, new changes in labour laws have imposed more precarious working conditions.

In order to answer the question of how the restructuring of work at chokepoints and the legal frameworks that deal with work affect workers' bodies at chokepoints, I retained the categories of spatial and temporal conflicts and analysed how they were triggered by specific laws or how workers raised concerns and struggled for specific improvements. In addition, I referred to Marlies Glasius's (2018) differentiated elaboration of authoritarian and illiberal practices. Her distinct consideration of authoritarianism as a practice of sabotaging accountability helped me to develop a concept of three forms of authoritarian practices that state apparatuses and companies employ in industrial disputes.

Authoritarian practice (I) is the unwillingness or inability of governments, ministries, and CEOs to negotiate on specific issues and grievances raised by

workers about their working conditions. It is also expressed in the closure of arenas for social dialogue and legal disputes, such as labour courts, or industrial institutions. I found several examples of this for all four chokepoints. In Santos in the 1920s, the government closed the first dockworkers' organisation for four years. But at the same time, from the 1940s onwards, dockers used the newly-established labour courts as a space for frequent struggles to improve their Social Reproduction Metabolism. In March 2018, they went on strike after labour reforms reduced the wages of temporary workers, while local authorities and companies refused to negotiate better contracts. In the aviation sector, workers fought for better spatial conditions for their work to reduce the number of plane landing accidents, especially at night. They also had to go on strike when the Ministry of Aeronautics refused to negotiate their demands. In this sector, however, the sabotage of responsibility never lasted long, given the importance and influence of the industry. In Portugal, in the 1970s, TAP workers tried to negotiate with the still dictatorial government and the TAP management, which refused to recognise the newly elected militant union leadership. In the 2000s, dockers met regularly with the transport ministry and went to parliament to express their dissatisfaction with the new dockers' law. The government refused to listen, however, and the unions were forced to take legal action.

Authoritarian practice (II) is the obstruction of strikes and protests when workers see no alternative but to use these forms of making their voices heard. This can be accompanied by illiberal practices such as physical violence by the police and military. Again, I found several examples in the history of labour in all four chokepoints. One of the worst authoritarian practices (II) was probably institutionalised in the Raul Soares prison ship, which was set up in the port of Santos at the beginning of the military dictatorship in Brazil in 1964. It was the place where militant dockworkers were taken after a three-day strike against the military coup. It was an apparatus to violently break the trade union movement in Santos. In a more recent example, during the general strike in April 2017, airport workers were violently attacked by the military police when they blocked the escape route with cars and other vehicles. This attack was part of a long tradition of police presence at Santos Dumont airport. During a strike in the 1950s and later in 1987, the repressive state apparatus was present to suppress strike activities and blockades. In Portugal, the battle at Lisbon airport in 1973 was an important example of authoritarian practice (II), when the police tried to prevent a workers' assembly. Compared with the battles at Santos Dumont, the airport workers still managed to occupy their workplace and drive out the police. In the Portuguese port sector, police intervention in the ports of Lisbon and Setúbal in 2018 to illegally break strike activities by using temporary workers was an example of authoritarian practice (II).

Drawing on the thinking of Alke Jenss and Benjamin Schuetze (2020) in analysing secondary ports in Colombia and Jordan, I have adopted a third au-

thoritarian practice (III). This is the practice of sabotaging accountability by refusing to discuss or by using force and shifting the scales of responsibility. Examples were particularly visible in the European context. Here, the Port Packages were not implemented in the way planned by the European Commission and the port and shipping lobby groups. For example, the Port Package was revived in the Memoranda of Understanding in the European periphery during the economic crisis, such as in Portugal. Here, the law coincided with a 2009 draft that was not accepted by the parliament. Driven by the economic crisis and the conditions attached to the 76 billion Euro bailout package from the Troika, the port package, including self-handling, moved from an international to a national level. The dockers also responded by taking their struggle back to the European level with the support of the IDC. For aviation workers in Portugal, the European Commission's Open Skies and Open Ground agreements upscaled their conflicts. They have weakened their ability to respond to the casualisation of their work. For the dockers in Santos, it was the global ISPS code that the OGMO used to extend its control over port labour.

On the third research question of how workers and social movements fought back despite the restrictive authoritarian practices, I also collected several examples. In particular, regarding the spatial difference between Portugal and Brazil, I have already pointed out how workers in Brazil were able to access their logistical power independently, while workers in Portugal tended to turn to international trade union structures. While in the port of Lisbon, social movement activists joined and supported the protest movements of the aviation workers of TAP and the dockworkers in Lisbon, in Brazil these movements still remain comparatively isolated from the wider population, except for larger general strikes and protests against the labour reform in 2017 and the pension reform in 2019. In all four cases, it is crucial to note that the characteristics and forms of struggles changed radically from 2020 onwards, as I will briefly allude to in section 10.5.

10.4 Methodological Reflections on Limitations

When I flick through the news, I still notice that global transport is often depicted as large container ships, ports full of cranes, and bridges, or other transport facilities. I also noticed that none of these images show a worker. The container ships, trucks, cranes, and bridges already seem to operate in driverless mode, fulfilling the needs and desires of capital accumulation. That is why Quinquela Martín's paintings move me. Although they are painted from a certain distance, workers are present at every stage of the supply chain depicted. This echoes my comment in the second methodological chapter that I want to

de-fetishize global transport by exposing the violence, power relations, and struggles at work in the industry.

To pursue this goal, I compared two countries with a long shared colonial history and a spatial pattern that emerged from that period. It still has an impact today on the logistics industry and class struggles within it. I used Hart's and Phillip McMichael's embedded and relational comparison, in which I embedded concrete examples from three historical periods from 1415 to 2020. In the overlap of historical analysis, I aimed to sharpen the focus and arrive at the sharpest view of the current conjuncture by looking at it three times from different perspectives: the development of logistics; the development of gendered, racialised and precarious exploitation patterns, and the history of the role of the capitalist state. The two states and the four chokepoints, including their workers, have different but intertwined histories. Without this relational and incorporated method of comparison, it would have been impossible for me to understand the specific role of space and colonialism in space. I would also have missed how it still influences the logistical power of aeronauts in Brazil. And I would not have seen how late the Portuguese working class, especially in the ports, entered the ranks of militant struggles, given their current account of militancy.

I began by developing quality criteria for my research design, linked to ontological and epistemological Marxist-Feminist considerations. I reflected on reflexive and democratic thinking, revealing power structures and reflexive and activist fieldwork, as well as obstacles and problems in academic practices and empirical research.

The limitations of the work are twofold. Firstly, there are not many studies on airport work that would provide more figures on specific accidents, illnesses, and problems in the sector. My study remains exploratory, and the airport crisis in the summer of 2022 will hopefully trigger more comprehensive quantitative and qualitative studies on the subject. However, given these limitations, I still believe that this is a saturated study. As will be shown below, airport workers have taken the lead in organising strikes in Portugal over the last three years. I have not been able to cover this newly emerging movement, nor to give details of the specific spatial and temporal conflicts of its actors, although I have already outlined possible reasons for protest in this thesis.

Secondly, I had to end the timeframe of my thesis precisely in the year of the pandemic, when many changes were taking place. The thesis would have exceeded its scope and limits and lost its explanatory power, including this historical event. However, a shorter but more in-depth study remains to be written on how workers at the four chokepoints behaved during the pandemic, which threatened the Social Reproduction Metabolism of transport workers in particular.

10.5 A Future of Four Chokepoints

By the summer of 2025, when this book is published, the world will have changed in so many ways since I began writing it.

At Santos Dumont airport in Brazil, the SNA returned to fight occupational diseases, publishing studies and organising discussions after the airport was partially closed during the pandemic. When I spoke to Selma Balbino in 2018, it was still unimaginable that just six months later, a right-wing populist like Jair Bolsonaro would win the general election. In March 2018, it was inconceivable how he would deal with the pandemic and how airport and port workers would suffer from a lack of sanitary protection and setbacks in occupational health and safety.

In 2020, the pandemic forced dockers to fight for protective masks and the right to go to work. They faced lockouts and the fear of contracting the Covid-19 pandemic from seafarers. Almost 18 months later, it was the other way round: With Bolsonaro denying the impact of the pandemic, dockworkers were struggling to get vaccinated and were behind the boarding seafarers, who were now afraid of being infected by the virus via the dockworkers in Brazil.

As I was writing these last lines of the thesis, the following news came from Portugal: "National airports face four-day strike in July and August". Despite the divisions between the unions, four airport unions, including SITAVA, have joined forces to fight for the workers who told me in 2017 that they exist in "nobody's world" and are not represented by unions: the social assistant workers. The Portway company, which refuses to consider them as skilled workers with career prospects, went on strike on 30 and 31 July and 5 and 6 August 2023. Not surprisingly, the strike was over overtime, as the workers say there are far too few staff to cope with the increase in assistant work at the airport.[126] It was not until 2022 that they went on strike for three days at Portway to reopen negotiations over pay, unfair dismissals from 2016, and unpaid holidays.[127] It is impossible to establish a clear causality between the actions of companies, the laws of states, the spatial history of chokepoints and the logistical power that workers have access to. However, the role of tourism in Portugal in recent years, and the growing new sector of assistant workers, emerge at a time when trade unions are beginning to rethink how to approach precarious female and migrant workers. Sectors that were considered "unorganisable" decades ago,

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126 See Lusa and Público from 6. July 2023 "Aeroportos nacionais enfrentam greve de quatro dias em Julho e Agosto" https://www.publico.pt/2023/07/06/economia/noticia/aeroportos-nacionais-enfrentam-greve-quatro-dias-julho-agosto-2055890 [Access: 27.07.2023].

127 See Lusa in Público from 28. August 2022 "Greve dos trabalhadores da Portway cancela 82 voos em Lisboa e 12 no Porto" https://www.publico.pt/2022/08/28/economia/noticia/greve-trabalhadores-portway-cancela-82-voos-lisboa-12-porto-2018586 [Access: 27.07.2023].

such as hospitals, warehouses, and other precarious and often female-dominated industries, have changed.

In the port of Lisbon, the SEAL Facebook page has not been updated for two years. The last SEAL strike was organised until 9 March 2020. At the beginning of the pandemic, 150 of the 350 workers in the port of Lisbon were sacked. This was a devastating blow for the militant union. For more than a year, they had been organising solidarity funds for the unemployed workers, hoping to reinstate them through a legal process. Instead, the pandemic and the bankruptcy of one of the port companies hit the militant workers.

The last few posts have been informing friends and colleagues of the death of a colleague. One of the workers I interviewed left the sector for good and now works in the gig economy. In 2021, one of the dockers who fought for health and safety protection died during a night shift at the port. He was run over by a lorry. This was the tenth fatal accident since 2001.

However, SEAL was not completely absent, nor did the union forget its origins. In the autumn of 2022, dockers from Lisbon again travelled to Liverpool to support the strike for a pay raise for their colleagues. Liverpool dockers also went through hard times in the 1990s, losing many of their battles. However, they were able to reinstate many of their colleagues and bring all workers back into the permanent workforce. SEAL was once inspired by the Liverpool dockers. It could be inspired again.

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12. Appendix

Appendix 1: Overview of interviewees

Name	Place	Group	Gen-der	Sector	Age	Year	Race	Length
P01	Lisbon	SEAL	cis-male	Port	51-60	2015	white	01:12
P02	Lisbon	SEAL	cis-male	Port	31-40	2015	white	01:12
G03	Hamburg	ver.di	cis-male	Port	31-40	2017	white	02:15
P04	Lisbon	EaE	cis-male	Port	21-30	2017	non-black	00:53
P05	Lisbon	EaE	Di-verse	Port	21-30	2017	white	00:32
P06	Lisbon	SEAL	cis-male	Port	31-40	2017	white	01:12
P07	Lisbon	SEAL	cis-male	Port	31-40	2017	white	00:41
P08	Lisbon	Expl	cis-male	Port/Airport	61-70	2017	white	00:50
P09	Lisbon	Flores No Cais	cis-female	Port	31-40	2017	non-black	00:33
P10	Lisbon	Flores No Cais	cis-female	Port	31-40	2017	non-black	00:11
P11	Lisbon	SEAL	cis-male	Port	31-40	2017	non-black	00:43
P12	Lisbon	SNPVAC	cis-male	Airport	41-50	2017	white	00:50
P13	Lisbon	SEAL	cis-male	Port	41-50	2017	white	01:23
P14	Lisbon	STCC	cis-male	Airport	31-40	2017	black	01:04
P15	Lisbon	Pant. Rosas	Di-verse	Port/Airport	31-40	2017	non-black	00:37
P16	Lisbon	SITAVA	cis-male	Airport	31-40	2017	non-black	01:48
UK17	London	Scholar	Di-verse	Port	31-40	2017	white	00:19
P18	Lisbon	Versus	cis-male	Airport	51-60	2017	white	00:36
P19	Sines	SEAL	cis-male	Port	41-50	2017	white	01:00

P20	Lisbon	Versus	cis-male	Airport	71-80	2017	white	00:27
P21	Lisbon	Versus	cis-male	Airport	71-80	2017	white	00:49
P22	Lisbon	SITAVA	cis-fe-male	Airport	31-40	2017	white	00:43
P23	Coimbra	Scholar	cis-male	Port/ Airport	41-50	2017	white	01:21
P24	Porto	SEAL	cis-male	Port	41-50	2017	white	01:16
P25	Coimbra	Scholar	cis-fe-male	Port/ Airport	31-40	2017	white	00:58
P26	Lisbon	SITAVA	cis-male	Airport	21-30	2017	black	00:44
P27	Lisbon	Scholar	cis-fe-male	Port	31-40	2018	white	no rec-ord
UK28	London	ITF	cis-male	Port	41-50	2018	white	01:08
UK29	London	ITF	cis-male	Port	51-60	2018	white	01:08
UK30	London	ITF	Di-verse	Airport	21-30	2018	white	01:08
UK31	Liverpool	IDC	cis-male	Port	61-70	2018	white	01:21
P32	Lisbon	-	cis-male	Airport	21-30	2019	white	00:43
P33	Lisbon	SEAL	cis-male	Port	41-50	2019	white	01:49
P34	Setúbal	SEAL	cis-male	Port	51-60	2019	white	12:16
P35	Setúbal	SEAL	cis-male	Port	21-30	2019	white	00:40
P36	Setúbal	SEAL	cis-fe-male	Port	31-40	2019	white	00:17
P37	Lisbon	SITAVA	cis-male	Airport	41-50	2019	non-black	00:45
P38	Lisbon	Scholar	cis-male	Port	21-30	2019	white	no rec-ord
B39	Santos	-	Di-verse	Port	31-40	2018	non-black	00:51
B40	RJ	Sindi-pedro	cis-male	Port	31-40	2018	non-black	00:26
B41	RJ	SNA	cis-male	Airport	41-50	2018	non-black	03:13

B42	RJ	SEPE	cis-male	Port/ Airport	31-40	2018	non-black	00:25
B43	Santos	-	cis-male	Port	41-50	2018	black	no rec-ord
B44	Santos	-	cis-male	Port	81-90	2018	black	no rec-ord
B45	SP	Scholar	cis-fe-male	Port	31-40	2018	non-black	01:03
B46	Santos	-	cis-fe-male	Port	41-50	2018	black	00:12
B47	Santos	SIND-ESTIVA	cis-male	Port	41-50	2018	non-black	00:36
B48	Santos	SIND-ESTIVA	cis-male	Port	71-80	2018	non-black	00:36
B49	Santos	SIND-ESTIVA	cis-male	Port	51-60	2018	non-black	no rec-ord
B50	Santos	SIND-ESTIVA	Di-verse	Port	31-40	2018	black	no rec-ord
B51	Santos	SIND-ESTIVA	cis-male	Port	41-50	2018	black	no rec-ord
B52	Santos	SIND-ESTIVA	cis-male	Port	21-30	2018	non-black	no rec-ord
B53	Santos	SIND-ESTIVA	cis-male	Port	31-40	2018	black	01:43
B54	Santos	SIND-ESTIVA	Di-verse	Port	41-50	2018	black	01:43
B55	Santos	SIND-ESTIVA	cis-male	Port	51-60	2018	non-black	01:43
B56	Santos	Scholar	cis-fe-male	Port	61-70	2018	black	no rec-ord
B57	RJ	Sindi-pedro	cis-male	Port	31-40	2018	non-black	01:10
B58	Santos	SIND-ESTIVA	cis-male	Port	31-40	2018	non-black	01:08
B59	RJ	SIMARJ	cis-male	Airport	41-50	2018	white	00:18
B60	RJ	SIMARJ	cis-male	Airport	41-50	2018	black	00:41
B61	RJ	SIMARJ	cis-fe-male	Airport	51-60	2018	non-black	00:41

B62	RJ	SNA	cis-fe-male	Airport	21-30	2018	non-black	01:40
B63	RJ	SNA	cis-fe-male	Airport	51-60	2018	black	01:40
B64	SP	SNA	cis-male	Airport	41-50	2018	white	00:36
B65	SP	PROFEM	cis-male	Port/Airport	31-40	2018	non-black	00:44
B66	Niterói	Scholar	cis-male	Port	61-70	2018	non-black	00:33
B67	Santos	SIND-ESTIVA	cis-male	Port	31-40	2018	black	00:36
B68	Santos	SIND-ESTIVA	cis-male	Port	51-60	2018	black	00:11

Appendix 2: Poem of Celso Ramos about TAP 12.07.1973

I
Trinta anos se passaramPoucas coisas se mudaram
Na sociedade desigual
Nunca devemos desistir
Da nossa meta atingir
O derube do capital

II
Com este objectivo presente
Os trabalhadores lutam sempre
Seja onde for o embate
Para se não perder na memória
Esta luta, reza a história
Travou-se nas instalações da TAP.

III
Pela manhã o telefone serviu
Para informar o que aconteceu
No final da refeição
Uns poucos ali pararam
Outros a estes se juntaram
Junto a edifício da administração

IV
Os trabalhadores sem desânimo
Mas num acto espontâneo
Só quem viu tem esta idea
Mais de 5.000 com certeza
Exigem com muito firmeza
Saber quem proibiu a assembleia

V
A resposta não tarda a chegar

Para os trabalhadores amedrontar
E com muita rapidez
Os trabalhadores ficaram surpreendidos
Mas souberam estar firmes e unidos
Para receber a polícia de choque do capitão Haltêz

VI
O Haltêz dá tres minutos, para tudo acabar
Num tom aeacador, para a todos amedrontar
Entre uns e outros, há um vazio de 3 m no meio
Os trabalhadores mantêm firmeza
Um minuto decorrido e com frieza
O Haltêz faz avançar com cassetetes e tiroteio

VII
Há que enfrentar a sorte
Mesmo que leve à morte
Na arte de novos oficios
Caiem uteneílios e coisas várias
Sendo estas, armas primarias
Arremessadas das janelas dos edifícios

VIII
Nesta correria precipitada
Ouve muita cassetetada
E muito tiro concerteza
Ouve feridos dos dois lados
Os polícias foram encorralados
Quando se atingiu a defesa

IX
Com a polícia encorralada
Havia que agir com destreza
Que ninguém seria despedido
E a polícia fora da empresa

X
Nada nem ninguem nos demovia
Desta nossa convicção
Mais um ponto acrescia
Direito à tal reunião

XI
Na nossa fortaleza principal
Fizemos interter os papeis
A polícia teve que reguar
Não entrando no hangar G

XII
Repressão tentou avançar
Com firmesa dissemos que não
Se algum de vós entrar no hangar

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Explodimos o avião.

Source: private Archive, 2017, Celso Ramos is a former TAP engineer and was an activist during 1973, Portugal

Appendix 3: Leaflets and material about airport struggles in Lisbon 1980-1996

Autor	Series	Date	Reference
Versus	Luta de Classes	30.03.1987	"Trabalho Precário"
Versus	Luta de Classes	09.06.1987	"Subtra-balhadores?"
Versus	Luta de Classes	22.06.1987	"Trabalhar Mais"
Versus	Luta de Classes	15.09.1987	"Prepotência"
Versus	Luta de Classes	26.10.1987	"Transportes Públicos Noturnos"
Versus	Luta de Classes	09.11.1987	"Duas Portas"
Versus	Luta de Classes	14.03.1988	"A TAP e a greve geral"
Versus	Luta de Classes	28.02.1989	"Greve as Horas Extraordinárias: Um Exito"
Versus	Luta de Classes	26.04.1990	"Subcontratação"
Versus	Luta de Classes	07.06.1990	"Os conhecidos dos TLP..." & "Como Anda o Clube TAP?"
Ana Sousa Dias	Público	17.10.1993	"O Desemprego Como Horizonte"
SITAVA	Revista do Sitava	12/1995-01/1996	Page Numbers

| SITAVA | Revista do Sitava | 04/1996-06/1996 | Daniel de Matos |

Source: All documents are in the private archive of the author

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Friederike Alm

The Politics of Us and Them – The Migration Politics Nexus

A Comparative-Historical Analysis of Canada, France, and Germany

Canada, France, and Germany share many similarities, for example, their democratic principles and constitutional commitment to human rights and equal opportunities. However, each country approaches immigration differently.

Friederike Alm presents a comparative-historical analysis which sheds light on the historical trajectory of migration politics in the three countries since 1945. The author proposes a new concept for migration research, the migration politics nexus, which highlights the interconnection between immigration, citizenship, and integration politics.

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Anne Engelhardt
Logistical Chokepoints, Precarious Work, and Social Reproduction
Labour Conflicts and the Metabolic Rift in Ports and Airports in Brazil and Portugal

Sitting at pivotal points of globalized economies, workers in logistical chokepoints such as ports and airports should have a lot of negotiating power. Examining the spatial-historical narrative of logistics in Portugal and Brazil, this book asks why working conditions in ports and airports are still predominantly precarious. Using her own field research and qualitative studies, Anne Engelhardt analyses the work and lives of workers along materialist theoretical approaches to social reproduction, the metabolic rift, the state, and the body.

The author: Anne Engelhardt is a researcher and lecturer in the Department of Social Sciences at the University of Göttingen.

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