



THE UNIVERSITY *of* EDINBURGH

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**Chipping away at
globalisation:
Transnational labour
organising in the
semiconductor industry**

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Degree of Doctor of Philosophy

The University of Edinburgh

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Declaration of own work

I declare that this thesis has been composed by myself and that the work contained herein is my own work. This thesis has not been submitted for any other degree or professional qualification

Emma Saunders,

Signed the 28/02/2020

WORD COUNT: 99,975

Abstract

In an age of globalised, highly competitive, volatile and financialised markets, the question of how to effectively organise workers to win concrete improvements in their working lives is increasingly difficult to answer. This thesis builds on four years of action-research, which supported eight unions in one company spread across five countries, to coordinate some of their actions and to push for a Global Framework Agreement to secure workers' associational freedoms. It highlights the difficulties that workers face when trying to collaborate across borders and argues that any attempt to effectively study or empower trade unions at the scale of their multinational employer must pay attention to the specific factors which condition their agency as well as to the goals, tactics and enactments through which the ideal of international solidarity is embodied.

The company studied produces silicon chips, employing approximately 28,000 workers across highly capital-intensive processes of research, development and chip production in the Global North, alongside 17,000 workers in the Global South to test and assemble the circuits. Between 2005 and 2016, the company underwent a process of financialisation, distributing ever larger dividends to its shareholders, whilst decreasing capital expenditure and implementing several restructuring and layoff plans. Faced with what they saw as an existential threat to their company's future, seven unions from four different countries (France, Italy, Morocco and Malaysia) organised successful joint actions to secure greater capital investments and the replacement of the corporation's senior management team. Following this campaign, these unions, joined by an eighth from Malta, created an international network to exchange information and campaigned without success for the company to sign a Global Framework Agreement. This attempt to organise across sites, languages, cultures, and institutional contexts, I argue, acts as a microcosm of the difficulties workers face in their efforts to exert power in a world characterised by globalising *and* centralising production and intensified financialisation.

This thesis makes two contributions to labour geography and struggles for workers' rights more broadly. First, it argues that any attempt to understand these struggles and their chances of success must be attuned to the actually-existing *conditions* of building solidarity and that these conditions cross a number of spatialities and temporalities. The unions' international solidarity efforts were balanced on a series of contradictory and uneven relationships. Their members were tied to specific national interests, and their company confronted heightened pressures of scale which

reverberated across the sites. Each union reflected their members' experiences and socio-spatial positionalities, whose register crossed a number of scales and each union was threatened and/or co-opted by corporate tactics and stood by different ideological visions. Unless scholars and activists attend to these detailed variations and stories, practices and studies of international labour solidarity will remain an abstract ideal, rather than placed in the grounded and 'messy' attempt by workers' organisations to deal with and work across multiple differences. Second, it argues that international efforts which focus on formal processes of rule-making at the expense of more grassroots and militant approaches stifle international collaboration. To sustain international collaboration, instead of an institutional and "dialogue"-based approach, which underplays the conflict opposing workers and their employers, trade unions should push for ambitious demands based on shared experiences and interests and engage in truly reciprocal forms of solidarity, rather than semi-patronising "help" models, whilst recognising that these discussions are traversed by each unions' local realities and ideological stances. Ultimately, this thesis reminds us that building a sense of collective agency at the international scale is an iterative process, necessary but difficult, facing constant threats and changing circumstances. In the face of a global economy managed with increasing disregard for workers' dignity and survival, let alone their power, it is vital that geographers pay increased attention to the strategies, challenges, and achievements of unions both on the ground, and, even if unsuccessful, over space.

Lay Summary

The dream of international solidarity is encoded in the progressive labour movement and, given the increasing power of multinational corporations, continues to make some workers', activists' and militant scholars' eyes sparkle with hope. This thesis presents and analyses one recent attempt to make real this elusive dream of worker empowerment through greater international solidarity. I examine the international grassroots campaign and then the trade union network organised by eight unions in one semiconductor company. My study sets forth in detail the possibilities, complexities and limits of international solidarity today.

Semiconductor chip production encompasses highly capital-intensive processes, including research and development and chip production (front-end activities), and labour-intensive processes, chiefly the testing and assembling of integrated circuits

(back-end activities). This company, in contrast to most semiconductor companies, continues to directly employ workers in both front- and back-end sites, connecting diverse workforces and work requirements through its production chain. The large, and ever increasing, capital investments required for front-end sites, as well as the industry's central role in the control of the fourth industrial revolution's deployment, have prompted many states to aid their national semiconductor companies through financial support, preferential agreements and ongoing oversight. The company operates within an increasingly financialised landscape, which prompted its senior management teams to favour strategies which maximise shareholder value at the expense of R&D, updates of means of production or improvements in working conditions. In this case study, eight unions launched an international campaign to confront the growing financialisation of their company, a campaign which led to the construction of a trade union network aiming to improve workers' rights across the company. This thesis analyses how the company's sectorial characteristics, which I show to be tightly bound with uneven landscapes of regulation and support, workers' socio- spatial positionalities and unions' own ideologies both enabled and constrained international collaboration among eight unions from five countries (France, Italy, Malta, Malaysia and Morocco). The unions were brought together around common interests, including fighting the threats implicit in financialisation, sharing information between sites and campaigning for the company to sign a Global Framework Agreement. However, over the course of three years, their differing ideologies, the ongoing everyday and local pressures they faced as well as the difficulty of sustaining truly reciprocal forms of solidarity prompted the network to suspend its activities.

I adopted an action-research approach and was embedded from 2015 to 2019 in the activities of an alt-labour NGO. I followed the unfolding of the campaign through the network of unions and complemented my observations with interviews and site visits. I claim that international solidarity within a TNC remains a process fraught with conflicts and traversed by workers' contradictions, but one that can succeed. While I offer no comprehensive solution on practicing international solidarity, I construct a detailed and comprehensive case study which may inform future attempts at creating transnational solidarity and contribute to labour geography's core questions regarding workers' ability to shape the globalised and financialised world they live in.

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List of key acronyms, abbreviations, and technical terms

AGM – Annual General Meeting

Back-end – semiconductor sites where testing and assembly activities are performed

CapEx – Capital Expenditure

CBA – Collective Bargaining Agreement

CFDT – Confédération Française Démocratique du Travail (French union)

CFE-CGC – Confédération Française de l'Encadrement - Confédération Générale des Cadres (French union)

CGI – Confederazione Generale Italiana del Lavoro (Italian union)

CGT – Confédération Générale du Travail (French union)

CISL – Confederazione Italiana Sindacati Lavoratori (Italian union)

CSF – Compagnie de télégraphie sans fil – precursor to ST

CSR – Corporate Social Responsibility

EIEUSR – Electrical Industry Employees Union Southern Region (Malaysian union)

EWC – European Works Council

Fab – factory which produces ICs.

Fabless – semiconductor companies which focus on developing chip design and relevant software, rather than industrialising and producing their designs

Foundry – semiconductor companies which focus on the industrialisation and production of ICs

FO – Force Ouvriere (French union)

Front-end – semiconductor sites, which encompass the R&D and production of ICs.

GCC – Global Commodity Chain

GFA – Global Framework Agreement

GPN – Global Production Network

GUF – Global Union Federation

GVC – Global Value Chain

GWU – General Workers Union (Maltese union)

IC – Integrated Circuit

Industri'ALL – Global union Federation for the electronics, manufacturing and chemistry sectors

IP – Intellectual Property

LLCR – Local Labour Control Regime

LPT – Labour Process Theory

PRA – Power Resource Analysis

R&D – Research and Development

ST – STMicroelectronics

TNC – Transnational corporation

TUN – Trade Union Network

UILM – Unione Italiana del Lavoro Metallurgia (Italian union)

UMT – Union Marocaine du Travail (Moroccan union)

UNSA – Union Nationale des Syndicat Autonomes (French union)

UWEEI – United Workers of Electronics & Electrical Industries (Singapore union)

Wafer – thin slice of semiconductor material used for the fabrication of ICs

WE – Worker Empowerment (Chinese alt-labour NGO)

Chapter 1:

Introduction

In February 2018, six months before my funding was due to run out and the first month in a while since my health had stabilised, lecturers, post-graduate students and post-doctoral researchers went on strike for 14 days across the UK. At the University of Edinburgh, we stood outside of our department in the cold, feeding the fire we maintained for warmth, eating too many sweets. We were exhausted and excited. As we dug in, I was impressed by the broad support from students and staff. There was excitement, notably when students occupied a building and when our University and College Union (UCU) branch gathered to refuse the first deal offered by the universities and pension scheme bodies. In March, another deal was on the table. Our UCU branch voted against it, arguing that the offer did not recognise how the main issue lay in the valuation scheme chosen, which was based on ideologically loaded hypotheses. National UCU representatives agreed to let the pension issue fall into a bureaucratic review system. The strike finished; we resumed work.

This was my first professional experience of what many of my research participants live regularly: the exhilaration of standing by one's principles and political commitments, and the emotional and monetary costs that it requires. I felt empowered when escaping the sometimes grinding and alienating pressures of work. I felt a suspended and slightly magical quality to this open time of possibilities, discussions, hopes and collective resistance. I also felt the tiredness; the sense of pushing a rock up a hill to see it fall back again; the schisms which opened amongst us as some crossed the picket lines whilst others did not; the tensions across scales of organising; the various ways to practice "unionism"; the complexity of reformist and radical goals coexisting.

I start this thesis with reference to our strike because this experience helped me understand the complexity of the decisions the workers I studied had to make. Reflecting on my experience helped me understand emotionally and personally how tensions between people get magnified when wages and time are put on the line and when it becomes about more than wages, and touches upon issues of dignity, respect and collective power. In our strike, I weighed the impacts on my work, energy and research against the moral and political imperative to support my colleagues and my rights. As personal pressures increased, it was not easy to stick with the picket line. In those moments, I reminded myself of Don Mitchell's (2008a, p.66) straightforward argument that "we never have the luxury of *not* choosing sides [...] [or] of *not* working in solidarity." I chose my side, as one committed to fighting for the respect of workers' rights, dignity and needs, both during the strike and in the research presented here.

- - -

Most laypeople in France would not recognise the name STMicroelectronics (ST) unless they are from l’Isère, a region dubbed the “French Silicon valley,” or closely follow financial markets. And yet, with revenue of \$8.42 billion (ST, 2019, p.10), ST belongs to the top forty capitalised French companies, is one of the few companies left that produces semiconductor chips in Europe,¹ and remains one of the largest industrial employers in France and Italy, amidst a global workforce of over 45,500. The company maintains so-called “front-end” manufacturing and Research and Development (R&D) sites in Global North countries and “back-end” assembly and testing sites mostly across the Global South (see **Map 1.1**). ST’s production thus crosses over a multiplicity of places and connects diverse workforces, which are differently organised and have varied sources of power (see **Figure 1.1**). For instance, Italy, Morocco and France have industrial models that encourage and enforce collective bargaining agreements regardless of union density and allow competing unions within the company. In contrast, workers in Malta and Malaysia are permitted to join only one union and no independent union exists in ST sites in China and in the Philippines.



Map 1.1: ST front-end and back-end sites throughout the world, map extracted from a promotional document put out by ST

¹ Along with Global Foundries (U.S.A.) and Texas Instruments (U.S.A.) in Germany; NXP, owned by private equity funds in Germany and the Netherlands; Infineon, owned by private equity funds, in Germany and Austria; and IBM (U.S.A.) in Ireland. This non-exhaustive list represents the major semiconductor *production* companies in Europe

Figure 1.1: Trade unions, sites and trade union membership ST sites in France, Morocco, Malta, Malaysia, China, Singapore, the Philippines and China. The colour code indicates front-end (blue) or back-end (green) status

| Name | Site(s) | Number of members |
|--|--|--|
| Confédération Générale du Travail (CGT) | Grenoble, Crolles 1, Crolles 2, Tours, Rousset, Paris, Le Mans, Sofia Antipolis, Rennes (France) | No numbers. According to national statistics, approximately 8% of French workers in large private companies belong to a union (Dares, 2018). If true for ST, this would correspond to approximately 800 people in STMicroelectronics across 6 unions. As the CFDT, CGT and CFE-CGC are the most 'representative' unions, based on the triannual site elections, one could guestimate that their members must be between 200-400, with fewer members in FO, CAD and UNSA. |
| Confédération Française de l'Encadrement - Confédération Générale des Cadres (CFE-CGC) | | |
| Confédération Française Démocratique du Travail (CFDT) | | |
| Force Ouvrière (FO) | Tours, Crolles 2, Rousset | |
| Union Nationale des Syndicats Autonomes – (UNSA) | Grenoble, Crolles 1-2, Tours, Rousset | |
| Collectif Autonome de Salarie.es de ST (CAD) | Grenoble, Crolles 1-2, Sofia, Rousset | |
| Union Marocaine du Travail (UMT) | Bouskoura (Morocco) | 85% membership, approximately 2200 members |
| General Workers Union (GWU) | Kirkop (Malta) | No data. According to national trade union statistics 50% of the Maltese workforce belongs to a union. In ST, this would represent 800 workers. However, the factory features a high turnover rate and new workers often do not join the union. |
| Electrical Industry Employees Union Southern Region (EIEUSR) | Muar (Malaysia) | 35%, approximately 1260 workers |
| All China Free Trade Union (ACFTU) | Shenzhen (China) | No data. Closely linked to the Communist Party, this is a mandatory union in all companies |
| | Calamba (The Philippines) | No union |
| United Workers of Electronics & Electrical Industries (UWEEI) | Ang Mo Kio (Singapore) | This is a democratic union, tightly linked to Singapore's tripartite system of industrial relationships |
| Confederazione Generale Italiana del Lavoro (CGIL-FIOM) | Agrate, Castalsetto, Catania, (Italy) | According to trade unionists, approximately 30% of workers are unionised (i.e., some 3350 workers). They did not provide the breakdown per union |
| Confederazione Italiana Sindacati Lavoratori (CISL-FIM) | | |
| Unione Italiana del Lavoro Metallurgia – (UILM) | | |

ST's latest 2019 Sustainability Report (2019b, p.39) claims a high compliance with labour rights requirements and outlines ongoing measures to make sure "all of [its] employees are treated with respect and dignity," whilst boasting of its participation in the Responsible Business Alliance. An examination of ST unearths no horror stories about working conditions; on the contrary, the company provides stable and reasonably well-paid jobs to its employees. Yet, it has also laid off over seven thousand workers in the last ten years, diverted an increasing share of its profits to its shareholders, and like most transnational corporations (TNCs), organises internal competition between its sites to "whipsaw"² states and unions to its advantage, illustrating, at its scale, the globalised, competitive, volatile and financialising ways in which global markets are operating and the consequences for workers.

ReAct is a French alt-labour NGO driven by the simple slogan that "since companies are global, so must be the resistance against them" (ReAct Manifesto, 2016). Critical of existing structures of international trade unionism for being overly bureaucratic (notes, June 2015), they have supported grassroots-based union networks since 2010 to encourage shop-floor union representatives to take part in international labour solidarity efforts. In 2014, ReAct members approached leaders of the CGT in ST to assess with them how they could support workers to form a union in the ST Calamba (Philippines) factory and associations of workers at ST's factories in Shenzhen and Longgang (China).³ These first ambitious goals were quickly abandoned following a shift in strategy by ReAct's Chinese partner and because organising ST Calamba workers was no longer the Filipino union's priority. Instead, ReAct members and I contacted unions in Morocco, Italy, Malta and Malaysia to foster greater international exchanges within ST and support an international campaign against ST's financialisation, which was followed by the creation of a trade union network (TUN) in September 2016. Unions hoped to use this TUN to share information regarding social benefits, working conditions and local struggles amongst participating unions, and to launch a campaign for a Global Framework Agreement (GFA), a *negotiated* code of conduct between a company and labour representatives. From then until the beginning of 2019, ST unions pushed for ST to sign a GFA. In 2019, having not succeeded and facing ongoing difficulties, the TUN disbanded, though unions still intermittently exchange information.

² Whipsawing refers to a tactic whereby "one negotiator plays off at least two other parties against each other to gain an advantage" (Greer and Hauptmeier, 2016, p.30).

³ This site no longer belongs to ST.

Drawing on this four-year-long action-research project, during which I analysed the rise of the TUN and helped it come into being, this thesis examines how unions can build power at the scale of their transnational employers and use TNCs as potential “key nodes in the cartography of international employment [...] to forge networks of solidarity between workers across space” (Wills, 2001, p.487). Given the extraordinary development of TNCs following neoliberal globalisation, scholars have encouraged trade unions to reconnect with international solidarity practices and build international structures able to match the power of TNCs for them to continue to defend their members’ interests and workers’ rights and dignity (Amin, 2008; Bieler, 2012; Bieler et al., 2010; Brookes and McCallum, 2017; Evans, 2014, 2010; Lindberg, 2014; McCallum, 2013; Munck, 2010; Waterman, 2001). Building such solidarity, I argue, is both about confronting shocking instances of workers’ exploitation, and more generally about fighting against the mundane ways in which TNCs have built power, whilst commanding a system that has seen workers’ global share of rising productivity gains steadily decline over the last thirty years (ITUC, 2016). Scholars have suggested that greater NGO-labour collaboration and grassroots efforts are key to achieving long-term and militant international solidarity (Brookes and McCallum, 2017; Cumbers et al., 2016; Evans, 2014; Zajak et al., 2017). This thesis analyses the difficulties faced by ST unions to enact a grassroots internationalism *and* unions’ constrained ability to overcome these challenges. I do so by attending to the spatialities and temporalities in which unions were embedded and the multiple loyalties and ideologies which both pulled unions apart and brought them together. These formed the actually existing *conditions* for building and *grounding* solidarity, and, I claim, examining these factors needs to be central to any attempt to understand and encourage workers’ international solidarity efforts.

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The ideal of global solidarity was most famously proclaimed in Marx and Engels’ (2004) summons: “Working men [sic] of all countries, unite!”⁴ Marx and Engels based this hopeful call upon a dialectical materialist understanding of history, according to which each system of production sows the seeds of its own destruction. For capitalism, its demise would result both from internal contradictions in the quest to realise profit and from the rise of a new agent of history, the working class. Marx and Engels (2004) believed that capitalism, by centralising the means of production

⁴ Though this sentence is associated with the Communist Manifesto, Flora Tristan, a French feminist socialist, coined the phrase “Workers of the World Unite” in her 1844 book *L’Union ouvrière*

and relying on a constantly expanding market of production and exchange, would bring about greater contact and interdependence among workers throughout the world. Further, by transforming individual workers into interchangeable commodity producers, by bringing them together in increasingly large production units and by changing them into mere appendages of a wider social machine, capitalist relations of production would create shared experiences of exploitation and alienation across the world. This vision of commonality across difference fuelled the labour movement and its rhetoric of class. A unifying identity and shared destiny, encapsulated under the term “working class,” would come about for the people who had become “the masses of wage earners in these new relations” (Denning, 2007, p.128) irrespective of nationality as “modern industry labour, modern subjection to capital [...] has stripped [the proletarian] of every trace of national character” (Marx and Engels, 2004, p.20). United by capitalism, workers across the world would promote their long-term common interests and together overhaul this exploitative system. Internationalism referred to both the *ideal* of international solidarity between the working class and the *means* to achieve greater power for workers.

As a scholar and activist, I am drawn to the prefigurative discourse put forward by Marx and Engels, that people can break down imposed spatial belonging, reimagine what they share in common, and fight for an alternative society.⁵ However, I am also aware that this dream, at its core, displays a normative and universalist idealism, which claims the global relevance of class as *the* common experience around which workers *should* organise, when the history of chauvinism, patriotism and war plainly debunks this dream. Feminist scholars have further shown internationalism to be a metanarrative that glosses over power imbalances between workers and the sexist and colonial practices of the industrial working class (Gibson-Graham et al., 2000; Katz, 2006; M. Wright, 2006). Both historically and now, there is no “abstract worker” but only masses of workers whose lives are geographically, socially, politically and economically diverse and crisscrossed with competition. Workers often resort to a racist or nationalistic discourse in attempts to protect themselves from perceived threats to their jobs and ways of life (Silver, 2003) and their organisations have also undermined other workers’ rights. For instance, throughout the 20th century, many Global North unions entered into types of national

⁵ I believe it is important to understand Marx and Engels as both astute scholars *and* political activists, who produced concepts with the aim of reframing so-called natural laws to change reality. Wills (2008a p.308) notes, “it is important to recognize the role of Marxism in *making* class a significant axis of identity.”

compromises,⁶ when they agreed to tame industrial action and cooperated with representatives of capital and nation-states to increase labour security and reap a share of the rewards of colonialism and industrial growth (Bieler et al., 2010; Braverman, 1974; Lindberg, 2014; Munck, 2010; Standing, 2009; Waterman, 2001). This nationalisation weakened many internationalist practices previously supported by trade unions. Van der Linden (2003, p.16) notes,

As soon as the British trade unions became *nationally* strong enough to rule independently on the admission of individual trade groups to the labour exchange, the necessity for an organisation that regulated the labour market internationally [disappeared].

Not only did unions' means of power focus upon the national scale, but so did the ideologies that guided them. Waterman (2001) claims that in the 20th century, a type of "national internationalism" arose whereby international union institutions and practices reflected national divisions, whilst Anderson (2002) adds that the ideal of internationalism lost ground to nationalism, which often became the frame through which workers imagined their liberation.

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Whilst history and theory plainly outline how workers' multiple and contradictory affiliations have challenged international solidarity efforts, reconnecting with this ideal feels more urgent than ever given the growing globalisation of production and exchange, the growing reach and power of TNCs, the rising nationalist discourses as well as race-to-the-bottom measures that seemingly drive most states' labour policies. Several national labour movements and campaigns have reached similar conclusions, re-embracing an internationalist agenda (Bronfenbrenner, 2007; Croucher and Cotton, 2012; Lerner, 2007a; 2007b). International union campaigns, often spearheaded by reinvigorated Global Union Federations (GUFs) have attempted to negotiate at the international level to improve workers' rights and have organised successful transnational cooperation (Croucher & Cotton, 2012; Fairbrother & Hammer, 2005). Using global support, notably in the home countries of selected companies, campaigns have negotiated better national bargaining agreements (Anderson, 2009; Banks & Russo, 1999); fought against plant closure (Castree, 2000a; Herod, 2001a) ; supported workers' organising efforts in anti-labour climates

⁶ By the end of the 19th century, van der Linden (2003, p.37) explains that, partly to "[suppress] social and political unrest and [take] the wind out of the labour movement's sails" and partly in response to emerging labour movements, many Global North states introduced labour regulations, systems of national collective bargaining agreements and types of welfare programs. In addition, mandatory education and military service encouraged workers' and by extension, unions' nationalism (van der Linden, 2008).

(Anner, 2009; Brooks, 2016; Delpech, 2015; McCallum, 2013; Tate, 2006); and forced TNCs to reinstate unjustly fired workers (Anderson, 2015; Anner, 2009; Birelma, 2018; Brookes, 2017; Cumbers, Nativel, et al., 2008; Juravich & Bronfenbrenner, 1999; Sadler, 2004a). More recently, GUFs have turned towards fighting and lobbying for companies to sign GFAs, which nominally acknowledge workers' basic freedoms (Dufour-Poirier & Levesque, 2013; Fairbrother et al., 2013; McCallum & Fichter, 2015). Concurrently, GUFs have created institutions to facilitate the exchange of information within TNCs, such as workers councils and TUNs (da Costa & Rehfeldt, 2009; Fairbrother & Hammer, 2005). Hennebert (2010, p.9) defines a TUN as

A relatively flexible grouping of unions from different countries which represent workers from the same multinational corporation. [Its] objectives are usually to facilitate the exchange of information and the sharing of experiences between country members, to improve workers' rights in the countries where they are not guaranteed and to coordinate unions' actions internationally. They might also seek to open new arenas for social dialogue and collective bargaining at the international scale.

These international efforts, whilst they demonstrate how workers may *use* globalisation to their advantage, remain fraught with difficulties, and crucially, scholars argue, are shaped by unions' scaled belongings. Lillie and Martinez (in Fairbrother et al., 2013, p.4) thus claim that

Trans- and inter-national strategies can only be understood in the context of the interaction between unions' embeddedness in national regulation, and globalizing production, resulting in transnational unionism consisting of a set of relationships between competing national players with competing visions of 'the global' within global production structures.

In addition to *national* embeddedness, Dufour-Poirier and Levesque (2013, p.52) argue, "transnational unionism also needs to be located in time and space," since the unions which compose transnational movements face *local* issues that capture their attention and weigh upon their international interaction. Their observation suggests that transnational union efforts need to be located in the variegated times and spaces that each union belongs to. These reflections reflect labour geography's project to assess the impacts of workers' scaled belongings and spatial embeddedness upon their agency (Herod, 2003a). Adding to the attention to *space*, Coe and Jordhus Lier (2011) stress that the need to examine the *temporal* dimensions of workers' agency and to "embed" unions' varied positionalities within specific states and Global Production Networks (GPNs). My study uses this notion of "embeddedness" to assess the impacts of workplace dynamics, understood as shaped by social, economic,

political and technological factors upon unions' ability to build power at a range of scales. To get beyond the understanding of embeddedness as only reflecting workers' positionalities and as "rigid", I analysed unions' ideologies and their impact on the international process and showed how workers' experiences of financialisation brought them to recognise common interests and fight for it together. Here, I expand on how my thesis contributes to these three aspects, namely the semiconductor sector, unions' stances and the experience of, and resistance to, financialisation.

My thesis examines workers in the semiconductor sector, which, despite having fuelled the growth of the world's GDP and revolutionised our societies (Brown & Linden, 2009),⁷ remains poorly understood from the perspective of unions' international efforts.⁸ Representing a \$30 billion market in 1987, semiconductor production and assembly ballooned into a \$410 billion industry by 2017 (Statista, 2017, p.7), establishing itself as one of the world's most profitable industries, just below the internet and software industries (Ezratty, 2014b). Dicken suggests, "Microelectronics has replaced the automobile as today's 'industry of industries'" (in Silver, 2003, p.104). However, Silver (2003, p.104) argues that employment in the semiconductor industry "has not had a direct impact of working-class formation equivalent to the historical impact of textiles or automobiles." Rather, the semiconductor industry has developed a complex international division of labour, reflected in ST's GPN. Workers in the Global North are strongly divided between blue- and white-collar jobs with blue-collar positions steadily declining because of the industry's rising automation, whilst in the Global South, workers have yet to enter "the ranks of the relatively well paid working class" (Luthje et al., 2013, p.235) and face a range of corporate tactics to prevent their organising (Asia Monitor Resource Centre, 2013; Nang & Ngai, 2009).⁹ There are few studies of international union solidarity in this sector (Brookes, 2017), whilst studies such as Luthje et al.'s (2013) that analyse the semiconductor industry's regimes of employment fail to analyse workers' agency. This thesis analyses how the material realities entailed in

⁷ A report by the consultancy firm McKinsey (Hasenstab, 2013, p.5) ascribes "up to 40 percent of the global productivity growth achieved during the last two decades to the expansion of information and communication technologies made possible by semiconductor performance and cost improvements."

⁸ By contrast, Anner et al. (2006) and Carmichael and Herod (2012) have provided this analysis for the automobile, maritime and clothing manufacturing sectors.

⁹ Workers have more recently been able to articulate their grievances through unions (e.g., in Malaysia), informal workers groups (e.g., China) or through NGOs' pressure on factories' clients (Brookes, 2017; Luthje et al., 2013). However such efforts remain incredibly hard.

chip production, along with workers' local context and the corporate tactics they faced, hindered the unions' ability to build power locally and internationally.

Despite the literature examining workers' "spatial dilemma," namely how workers' spatial belongings may complicate their class-based ones (Castree et al., 2004; Herod, 2003b), few studies examine the importance of subjectivities and ideologies to workers' international organising (Birelma, 2018; Bolsmann, 2010). The dimensions presented above to "embed labour" thus fail to encompass unions' ideologies, despite Brookes (2013a) showing that these are crucial to unions' power and their international efforts, and Wills (2008a) arguing that greater attention is needed regarding how to politicise class. Rathzel et al. (2014, p.21) add that scholars often fail to engage with the subjectivity of workers, noting that "even when workers speak in labour studies, they are only allowed to exist as a figment of the research's critical engagement with capitalist control." In keeping with these insights and critiques, this thesis seeks to make space for workers' "diverse, fractured, and contradictory experiences" (Rathzel et al., 2014, p.69) and demonstrate that workers and unions were torn by different loyalties, and ideologies, at the local, national and international level.

My ethnographic approach which combined site visits with the observation of, and participation in, most of the TUN's spaces enabled me to address these questions over a relatively long period and thereby understand the impact of unions' different cultures upon the development of international relationships. Brookes (2013, p.32) explains that long-term interactions, as opposed to merely putting out urgent fires, are crucial to the rise of international solidarity because solidarity and "reciprocity [are not] established overnight [but result] from repeated instances of active support among unions over a period of time" (see also Bergene, 2006; Lillie and Lucio, 2004). Whilst most studies of international alliances analyse campaigns after they have achieved their goals (see Anderson, 2012; Anner et al., 2006; Banks and Russo, 1999; Brookes, 2017; Castree, 2000a; Cotton and Royle, 2014; Holland and Pyman, 2011; McCallum, 2013; Wad, 2014, exceptions being Anderson, 2015; Cumbers et al., 2016; Hennebert, 2010; Tate, 2006), my approach allowed me to analyse the impacts of each unions' local contexts and culture upon their international efforts. Beyond understanding the role of unions' varied ideologies, I also show *how* the very process of international collaboration served to reduce union radicalism, agreeing with Savage and Wills' (2004, p.6) argument that "an understanding of the challenges from within the labour movement is as important as understanding the challenges from outside." Understanding these differences is crucial to the analysis of labour's

constrained agency, since the TUN's efforts stumbled, and ultimately ceased, because of unions' different ideologies and understandings of international solidarity.

Finally, my thesis examines the importance of understanding workers' varied circumstances, not just because they constrain workers' agency, but also because they may provide the source of common experience between diverse workforces. Taking seriously Banks and Russo's (1999, p.565) claim that international campaigns "must emanate from local workers' agendas, because there are no international workers, only local workers," my thesis attended to ST workers' experiences of financialisation. Whilst literature understands financialisation on a macro-level as a new regime of accumulation (Krippner, 2005), on a meso-level as the emphasis upon maximising shareholder value (Millberg and Winkler, 2005) and on individual-level as the rise of the financialised subject (Mazaratti, 2011), there remains little understanding of the impacts of financialisation on working conditions and workers' relationship to their labour (Cushen, 2013). Financialisation is mostly portrayed as an unstoppable and *abstract* force, which workers have to cope with (Aalbers, 2019), rather than understanding how, in some circumstances, workers may resist it. I show that the focus by ST senior managers on maximising shareholder value prompted workers to feel increasingly alienated from their labour and precarious in their employment. This situation culminated in 2016 when ST closed its digital division and announced the layoff of 1,600 workers, a decision which unions linked to ST's financialised outlook. Unions used their memory of the previous industrial vision which had driven ST, their knowledge of the business, their links to public office holders and a more or less successful international collaboration, to shift the strategy guiding ST. Whilst in itself an important contribution to the understanding of labour agency in financialised times, this campaign also demonstrates the importance of attending to workers' workplace experiences to sustain international labour solidarity. By answering to "local" workers' agenda, this campaign was able to bridge the divisions between ST's various unions and workforces. It illustrates how, *empirically*, unions can build common interests, demands and strategies and, *theoretically*, the need for international solidarity efforts to be grounded in workers' varied realities for the ideal to be relevant to workers' lives.

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I chose a research project that allowed me to support an existing organisation and an ongoing struggle, rather just to document and analyse its efforts. This stance reflects the "pragmatic imaginary" advocated by Harney et al. (2016) whereby researchers can work with community organisations to combine knowledge production with the

creation of new publics which can work to remaking the world in a more socially just manner. Having heard about ReAct through my activism in France and inspired by their attempts to build *power* at the grassroots level against TNCs, I approached them in February 2015, prior to the start of my PhD. In June 2015, we designed together an action-research project, which aimed to support ReAct's attempts to facilitate greater transnational links between ST workers and would enable me, as a researcher, to explore the questions mentioned above. As part of ReAct, I encouraged union leaders to work together by organising conference calls, visiting union leaders in each site, supporting leaders to exchange information and facilitating their transnational efforts. I committed to take part in ReAct's experimental attempt to support ST unions, and, as a result, I and my research were somewhat vulnerable to the evolution of this project.

I am aware of the dilemmas that assuming a triple role (researcher, member of ReAct, supporter of the TUN) entailed, as I switched between acting and analysing. This stance caused my supervisors and me to worry about my influence over the processes I studied. Whilst I reflect on my normativity in Chapter 3, one of my driving methodological beliefs is clearly phrased by Hyndman (2001, p.262), who argues,

As a researcher, one is always in the field; [by] being in the field one changes it and is changed by it; and [field] experience does not automatically authorise knowledge, but rather allows us to generate analyses and tell specific kinds of stories.

I believe that *whatever* we choose to do as researchers changes the object of study, and here I *choose* to be transparent about my goal to support my object of study to come into being. I did not prescribe what union leaders should do, however I tried to resource their efforts (see Derickson and Routledge, 2015a), providing them with knowledge of each others' realities and with resources, of which the most simple and crucial was time. I acknowledge that by having actively supported this effort, I risk eschewing the complexity of particular struggles in favour of seeking to connect workforces whose differences may, in fact, overshadow their commonalities. Importantly, whilst I have spent four years supporting and studying trade union internationalism, I do not hold that it is always the best *solution* to achieve workers' goals or that class is always *the* identity that brings people together. Rather, and as this thesis demonstrates, activities at all geographical scales continue to be important for workers' success as do their range of identities and loyalties. However, I *do* believe that developing reciprocal solidarity, notably through trade unions, is crucial to bridging some of the differences that tear the world apart. My work tried to adopt what Mitchell (1995) calls a "critical romanticism" towards union representatives

and workers. I see the value of romanticism because I believe that we, as academics, *need* to offer alternative narratives of agency by workers in order to imagine how to change the current injustices that structure our world. By the same count, we *need* to retain our critical edge in order to temper our hopes with “sober descriptions of the reality of intra-class racial warfare, gender violence, the despotism of many union nomenclatura, and the at times appalling tactical decisions made by workers or other social movements” (Mitchell, 1995, p.323). My research supported a specific struggle without either romanticising workers’ actions, censoring my ethics or prescribing what should happen.

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To analyse unions’ constrained ability to build transnational labour solidarity in one TNC, as both a tool for power and as an ideology, I examine three ancillary questions:

- (1) How does the embeddedness of workers and by extent, unions, in GPNs, states and local dynamics shape their ability to organise at a range of scales?
- (2) What is the significance of workers’ ideologies to their capacity to organise locally and internationally?
- (3) How do the internal dynamics between unions and their divergent ideologies shape a TUN’s effectiveness?

My thesis is structured as follows: Chapter 2 introduces the field of labour geography and the growing pressures on workers’ organising in the wake of neoliberal globalisation. I review the scholarship that specifies agency and emphasises the importance of understanding labour agency as constrained spatially, temporally and relationally. In Chapter 3, I detail my action-research framework, present my methods and reflect on the power dynamics my methods encountered.

Chapter 4 describes the bare bones of the six-year effort by ST unions to increase their international collaboration, simply telling my readers what happened. In the next two chapters, I set out to “embed” ST workers and unions, by attending to the sectoral specificity of semiconductor production, workers’ various positionalities, local union cultures and labour-management relationships, because, as Brookes (2013a, p.26) argues, transnational labour alliances are “only as effective as the individual unions that constitute them.” In Chapter 5, I argue that ST’s global organisation has been shaped by states as regulatory contexts and agents seeking to protect their national competitiveness. The factors that inform where ST has allocated each step of chip production, alongside existing uneven national regulations, led to a workforce with unevenly distributed power, and unevenly vulnerable to the company’s whims. Such unevenness *conditioned* unions’

engagement with international collaboration. In Chapter 6, I show how workers' varied socio-spatial positionalities and their unions' contrasting ideologies, in the context of divisive corporate tactics, challenged unions' ability to build power and work together at the local and international level.

Chapter 7 examines ST's financialisation, which led workers to feel increasingly insecure about their jobs and alienated from their labour, and provided unions with a source of common interest. Workers across ST feared that this process threatened the company's future and, as a result, their jobs. Workers resisted these changes, arguing that they embodied a short-term logic favouring shareholders' value at the expense of an industrial vision which would secure ST's future. In Chapter 8, I show that workers' concerns fuelled an international campaign to curtail ST's financialisation, during which unions developed a powerful narrative contrasting an *industrial* strategy with a *financialised* one. This narrative discredited the sitting senior management team, established the ground for unions collaborating across their geographical, professional and ideological divisions and created a common interest with the French and Italian states in securing ST's survival. Their campaign's ability to spread across countries demonstrates the need to base international solidarity upon the everyday realities which matter to workers.

In Chapter 9, I argue that the TUN was traversed by conflicts over what the TUN should aim for, who should negotiate for the TUN and which tactics it should use. The unions' choice to focus on pursuing a GFA, an aim which was driven by the GUF's agenda rather than by workers' needs, and the presence of moderate unions led the international effort to collapse on itself. Furthermore, the TUN's discussions mobilised a North-South "help" vision which prevented a more radical imagination of what reciprocal solidarity could mean. In my conclusion, Chapter 10, I argue that unions' local contexts and cultures conditioned their collaboration and ultimately caused the demise of the TUN, but also that unions were able to sustain greater international collaboration temporarily and when this was grounded in workers' realities. I argue that attention to workers' realities and ideologies is empirically crucial to building international collaboration and theoretically central to labour geography's core notion of workers' constrained ability to shape the geography of capitalism. Between chapters, I have set interludes, which feature stories of workers navigating various threats to their employment. I use these to thread place-based accounts into the thesis and offer some ways for my readers to grasp the complex landscapes, experiences and struggles that make up this TNC.

Chapter 2:

Labour geography, labour's geographies

As I mention above, labour internationalism encompasses “how” questions regarding the building of workers’ power, the dream of commonality between workers, when that dream is as much to be made as it is real, and the question of the ability of workers to shape their landscapes (Herod, 1997). This literature review attempts to weave throughout an attention to these various aspects of international solidarity, showing how international solidarity remains both profoundly elusive given workers’ constrained agency, but also ever more necessary in the face of neoliberal globalisation.

In Section 1, I introduce labour geography as a subdiscipline that emerged alongside the changes prompted by neoliberal globalisation. I review the neoliberal globalisation literature as one that reproduced a narrative of workers as helpless recipients of such changes and highlight how, by contrast, a labour geography perspective unearthed possibilities for workers to also use globalisation to further their goals. Then, across Section 2 and 3, I review three areas of labour geography which Castree (2007) and Coe and Jordhus-Lier (2011) claim need further analytical development: the notion of labour agency, the spatial and temporal dimensions of labour’s agency and the need to understand the multiple relationships that define workers’ lives. Mitchell (2011) describes this question as “labour’s geography,” that is the political and economic environment which conditions workers’ agency. To these questions, I add the importance of understanding workers’ socio-spatial positionalities to account for intersectional understandings of workers’ identities (McDowell, 2009) and of analysing the ideologies unions uphold, which, Birelma (2018) argues, are often ignored in studies of transnational solidarity. In Section 2, I present the literature on labour’s agency, and, in Section 3, the literature regarding embedding workers’ struggles. This review of the various dimensions and identities which constrain workers’ agency justifies my thesis’ attention to ST workers’ varied contexts, positionalities, and stances, as key to understanding how their international interactions unfold.

1. Labour geography and neoliberal globalisation

Herod (1997) coined “labour geography,” an ontological, epistemological and political research agenda, to encourage greater attention to and appreciation of workers’ role in the production of capitalism’s spatial organisation. His call paralleled the rise of New International Labour Study in sociology and political science (Brookes & McCallum, 2017), and followed growing attention by geographers to the spatialisation of employment issues (N. M. Coe & Kelly, 2000; Massey, 1995; McDowell, 1997; M. Wright, 1999). These fields of study emerged alongside studies of the concrete process of increasing global interdependence across places, institutions and systems or “globalisation,” whilst scholars also showed that this term represented a *political* attempt to promote the global coordination of activities under a neoliberal agenda (Jessop, 2002). Peck et al. (2010, p.97) thus stress that “neoliberalism” was a term precisely coined to “*denaturalise* globalisation processes [and call attention] to their associated ideological and political constructions.” Throughout, I thus attend to both the materiality of these changes and the ideology underpinning them. This discussion begins with an overview of labour geography, which is followed by a review of the literature on neoliberal globalisation and of its critique by labour geographers.

a. Labour geography

Herod (1997) critiqued Marxist geography for producing a “geography of labour,” which featured labour only as a factor in the production of the geography of capitalism. For instance, Smith's (2008) major work *Uneven Development* explains the world’s uneven development through the lenses of capital’s spatial decisions and the internal dynamics of differentiation and equalisation. Labour mobilisations figure in the seesaw pattern of development - they encourage crises of profitability by pushing wages up and diminishing the profit margin, yet Smith conceptualises them as by-products of capitalist development rather than as its driving force. Similarly, Harvey's (2006) seminal work *Limits to Capital* argues that the growth-driven nature of capitalism provokes crises of over-accumulation which then shape capitalism’s creation of various “fixes” to secure desirable profit rates. Whilst Harvey (2006, p.xxiv) acknowledges that, “if the working class was strong enough to constitute a barrier to profitability, then it had to be disciplined, its wages and benefits reduced and all signs of its capacity to exert a profit squeeze removed,” his narrative places the onus of action on capital and portrays people as spectators caught

in the reproduction of capitalism. However, despite the lack of theoretical attention to workers, both authors' works are also steeped in a belief in the power of people's mobilisation. Smith (2008, p.203) argues,

We have seen that given its inherent global tendency toward equalization, capital strives to differentiate space below the global scale as a means of political control as well as economic survival. The working class must attempt the precise opposite; as a class divided it must strive toward equalization at the global scale. [...] [This] can be achieved to the extent that spatial cooperation among the working class is developed as a political force.

Labour geography aimed to bring back the focus on the possibilities, conditions and complexities of such efforts. The sub-discipline has sought to make workers' experiences *theoretically* central to "the very constitution of capitalism, taking to heart the significance of efforts like E.P. Thompson's (1978) that show how understanding capitalism *as it actually is*, is impossible without a direct focus on the complexity of the everyday lives of workers" (Mitchell, 2011, p.566). It seeks to analyse workers' concerns and actions, the difference that space and place make to workers' organising efforts, and how these are central to the development of capitalism and its geography (Wills, 2008b). The sub-discipline stresses the crucial fact that, to produce value, capitalists must (somewhat and sometimes) compromise with workers and make concessions, as workers ultimately own their labour power (Offe, 1985). Cumbers et al. (2008a, p.270) describe this need as capitalists confronting the "labour problem," which refers to "the need to successfully incorporate labour into the production process, [...] the need to exercise control over labour time in the production process and [...] the imperative to exploit labour as part of the process of commodification to realize surplus value."

Different disciplinary traditions have suggested different concepts to understand capitalists' responses to the labour problem. From the perspective of corporate control, sociologists, drawing on Burawoy's (1979) notion of a "regime of production," analyse the various mechanisms developed at company-level to secure workers' participation in the production process and workers' range of reactions, from resistance to consent, to these regimes (P. Thompson, 2010). This tradition, coined as the Labour Process Theory (LPT), offers an important acknowledgement of workers' agency, however it focusses on local relationships, somewhat bypassing processes happening beyond the shop floor. Broadening the scope of LPT, Jonas (1996, p.325) proposes the concept of Local Labour Control Regimes (LLCR), defined as a "historically contingent and territorially embedded set of mechanisms which coordinate the time-space reciprocities between production, work,

consumption and labour reproduction.” This concept sets local regimes of control within the Marxist understanding of uneven development, claiming that

[LLCR] are negotiated *and* contested socio-territorial structures. [...] [which lead to] an uneven landscape of labour control which, in turn, forms the social basis of subsequent rounds of industrialization and restructuring. (Jonas, 1996, p.329)

This concept foregrounds uneven development as, in part, the result of *contested* settlements, and links sociologists’ corporate-level focus to broader landscapes. Instead of workers just reacting to regimes of production, Jonas (1996) emphasises the negotiated aspect of LLCR. He thus joins with the labour geography perspective which stresses workers’ ability to become “*active* geographical agents, whose activities can shape economic landscapes” (Herod, 1997, p.3).

This notion of workers’ agency is central to labour geography’s epistemology and research agendas. Herod (1997; 2003a) argues that workers, similar to capital, may desire and struggle to produce specific economic and political landscapes to ensure their reproduction and produce their own “labour spatial fix.” Labour spatial fixes range from workers’ campaigning for affordable housing and better transportation provision to unions making common cause across space, and may be performed by a range of labour representatives – from individual workers to unions and political parties. For Herod (1997, p.17), recognising workers’ agency enables

A more deeply political theorization of the contested nature of the production of space under capitalism for, ultimately, it is the conflicts over whose spatial fix (capitalists’ or workers’) is actually set in the landscape that are at the heart of the dynamism of the geography of capitalism. This means that understanding processes of class formation and inter- and intra-class relations is fundamentally a geographical project.

To understand processes of class formation *geographically*, he encourages geographers to examine “how workers’ spatial embeddedness may influence their behaviour, how workers must engage with the unevenly developed geography of capitalism and how workers seek (or not) to make common cause over space” (Herod, 2003a, p.117). My thesis aims to address these questions by looking at workers’ ability to build international solidarity in one company, drawing upon labour geography’s key insights, namely the emphasis on workers’ agency, and the importance of space in shaping class struggles – and vice versa.

Following Herod’s call, some geographers regrouped under the label “labour geography.” These scholars analysed different labour representatives such as trade unions (Herod, 2001a; Sadler, 2004b; Wills, 2001) or labour-civil society coalitions

(Tattersall, 2009; Tufts, 1998), and different scales of struggles whether at the workplace (Castree, 2000a), in a locality (Kelly, 2001) or over legislation (Coe and Kelly, 2000). Coe and Jordhus-Lier (2011) argue that these studies mostly focussed on workers able to change their geography and ignored the varied ways in which people “labour” under capitalism, echoing the broader feminist observation that “work” under capitalism is not confined to the formalised workplace (see Gibson-Graham et al., 2000; McDowell, 2009; Mies, 2014) and that the definition of labour is profoundly social and historical (Grint, 2005). Doing so, they claimed, meant that early studies sidelined non-labour-related terrains around which workers organise and workers who are less able to shape their geographies. More recently, studies based on an expanded understanding of labour have examined new methods of organising, the various identities workers may organise around, and struggles by more vulnerable workers (Aguilar & Ryan, 2009; Alberti, 2014; Alberti et al., 2013; Avendano & Fanning, 2014; Binford, 2009; Carswell & De Neve, 2013; Jenkins, 2013; Johns & Vural, 2000; Kelly, 2012; Lindell, 2010; Lund-Thomsen, 2013; Padmanabhan, 2012; Pye, 2017; Simms & Holgate, 2010; Tattersall, 2009; Vijayabaska, 2017; Wills, 2008a, 2012).¹⁰ I acknowledge that my focus on relatively protected, organised and powerful workers replicates this early bias. I pursued this focus nonetheless because these workers belonged to a structured and relatively large workforce, and hold an interesting potential to disrupt the most powerful companies, namely TNCs of the telecommunication sector.

b. Trade unions facing neoliberal globalisation

Whilst labour geographers have offered a renewed emphasis on analysing and understanding workers’ agency, in practice, neoliberalisation, financialisation and globalisation, which have come to dominate – unevenly and in a disparate fashion – the production of space, have altered the balance of power between organised labour and capital achieved in the Global North post 1945. Here, I briefly review the

¹⁰ History also puts into perspective the narrow focus on wage work, showing the multiple ways in which people have “worked” under capitalism

The notion of [a working class] was invented in the 19th century to identity a group of so called ‘respectable’ workers in contrast to slaves and other unfree laborers, the self-employed and poor outcasts. [...] Such a classification simply *does not apply* in the Global South. [...] We have to recognize that the ‘real’ wage-workers with whom Karl Marx was centrally concerned, i.e., workers who as free individuals can dispose of their own labour power as their own commodity, and have no other commodity for sale, represent only one way among others in which capitalism transforms labour power into a commodity. (van der Linden 2008, p.10)

literature on each phenomenon, understanding them as a set of ideas as well as continuous processes of *making* neoliberalism, financial dominance or global integration happen (Aalbers, 2019). I further show how, at the same time, these changes have prompted scholars to call for renewing labour internationalism.

Neoliberal ideology “proposes that human well-being can best be advanced by liberated individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade” (Harvey, 2005, p.2). Unions and labour rights are antithetical to this vision, as they seemingly constrain individual and market freedom. As a result, states driven by a neoliberal outlook have actively targeted “the political and institutional collectivities upon which more progressive settlements had been constructed” (Peck and Tickell, 2002, p.385). Amongst other things, governments have attacked regulations protecting workers and their organisations, limited welfare provisions, restricted the scope of solidarity strikes and of bargaining agreements, encouraged workers to free ride, and promoted the flexibilisation of labour markets (Cumbers, Nativel, et al., 2008; Hennebert, 2010; Hyman, 2008; Luce, 2014). In the Global North, following the crisis of Fordism whereby wages became too high – or were astutely portrayed as too high – for capitalism to maintain an “adequate” profit rate, neoliberal measures have undermined the social compromise of rising productivity against rising wages (Harvey, 2006; Streeck, 2014) and sheltered capital from risks, which are transferred onto workers instead (Standing, 2009; P. Thompson, 2010). In addition, neoliberal measures have fragmented and individualised the workforce, undermining the collective identity and shared conditions of work which are core to unions’ power (Cumbers et al., 2016; Luce, 2014; Padmanabhan, 2012).

These trends are exacerbated by financialisation, which Aalbers (2015, p.214) suggests represents “the increasing dominance of financial actors, markets, practices, measurements and narratives, at various scales, resulting in a structural transformation of economies, firms (including financial institutions), states and households.” Sokol (2017) outlines that studies of financialisation have examined three interrelated scales of changes. Some scholars argue that financialisation represents a new regime of capital accumulation, where profits increasingly stem from financial channels and financial engineering rather than from trade, production and product markets (Aalbers, 2015; Crotty, 2008; Fine, 2010; Lapavistas, 2011, and debate by Christophers, 2012). For Silver (2003), this shift undermines workers’ power because industries increasingly have to offer the same rate of return that financial activities promise and do so by squeezing wages. Krippner (2005) adds that,

given that financial returns now represent a greater share of firms' total income, firms have less incentive to compromise with workers (see also Guschanski and Onaran, 2018), and, as a result, the wage share of national income has fallen across the board (Aalbers, 2019). At the mid-level of analysis, scholars argue that financial standards increasingly set business norms, pressure how companies allocate resources, and encourage managers to privilege shareholders' interests (Bachet & Compin, 2013; Froud et al., 2000, 2014; Sauviat, 2003). Lastly, some scholars have analysed the everyday life consequences of financialisation pointing to the way in which financial risk, metrics and practices have become bound up with and normalised through everyday activities, and seep into people's sense of self (Christopherson et al., 2013; Garcia-Lamarca & Kaika, 2016; Marazzi, 2011; Pike & Pollard, 2010). Whilst each of these perspectives points to consequences for workers, Cushen (2013, p.315) claims that workplace consequences of financialisation "remain under-specified," adding that "[scholarship] is at best unaware of what employees experience on a daily basis and is at worst encouraging a default view of employees as hapless recipients of deterministic financialized outcomes." My work addresses her observation by analysing ST workers' experiences of *and* resistance to financialisation's workplace consequences.

These two phenomena work hand in glove with the rise of "globalisation." This term refers to the fact that markets, financial exchanges and production processes are increasingly integrated and take place at the global scale, changing the relationships between places and enabling the faster diffusion of phenomena across the world (Herod, 2003a). Globalisation resulted from the breakdown of the Bretton Woods system which brought on regulatory shifts that promoted trade and financial liberalisation and was lubricated by the technological revolution in communications and transport (Dicken, 2004). Geographers emphasise that globalisation entails a reshuffling of scalar relationships and has disrupted "entrenched assumptions about what kinds of social activities fit properly at which scales" (Smith in Jones III et al., 2016, p.145). Swyngedouw (2004, p.25) explains that "institutional/regulatory arrangements [have shifted] from the national scale both upwards to supra-national or global scales and downwards to the scale of the individual body or to local, urban or regional configurations." He argues that this shift has strained the power of the state to mediate tensions between citizens, workers and corporations. The internationalisation of capital following has enabled TNCs "to play an increasingly dominant role as geographical integrators of the global economy" (Rainnie et al.

2013, p.179).¹¹ Companies have transformed themselves into “integrated transnational production and sales machine[s], increasingly part of an open-ended network of cross-border financial and legal contracts and transactions” (O’Neill, 2012, p.80). The reorganisation of TNCs has often created situations where “legal ownership of the forces of production has been divorced from operational control [and thus] accountability for labour conditions is generally diffuse” (Lichtenstein, 2011, p.355). Unions increasingly struggle to exert influence in TNCs’ increasingly segmented and dispersed organisation expressed in parallel with a centralisation of corporate decision-making (Anner, 2003; Bieler et al., 2010).

The growing power of TNCs alongside the seemingly declining power of states, and their growing reluctance to regulate markets, has sustained fears of businesses offshoring if workers demand too great a share of the profits or respect for their rights. As a result, Wills (2002, p.680) claims that “workers' organization is often viewed as an expensive luxury in the cut-throat battle to secure jobs and investments.” Nation-states are pushed to use the cost and malleability of their labour force to attract capital, leading to a race to the bottom for workers’ rights and benefits (Taylor & Bain, 2008). This, Aalbers (2019) stresses, results from the interconnectedness of processes of financialisation, globalisation and neoliberalisation, outlining that

Offshoring, [...] may be *motivated* by financialization but its *effect* is economic globalization. Furthermore, both globalization and financialization are often promoted and furthered through a neoliberal agenda, sometimes through false pretences of levelling the playing field while in fact redrawing the field in favor of corporate and financial elites, and their shareholders.

Faced with this triple onslaught, Bieler (2012, p.371) argues that national unions “have been surprisingly unable to match the power of capital at the global level in ways that are necessary to force the latter into anything close to the compromises and concessions won in the immediate post-war era.” Over the last forty years, wages have stagnated despite rising labour productivity and profits have accrued primarily to capital (ILO, 2015); union membership has drastically, though unevenly, declined (van der Linden, 2016, p.202); and painfully acquired labour rights have been weakened (ITUC, 2016). Neoliberal globalisation has clearly reinforced TNCs’ power at the expense of workers’ rights. The question becomes how can workers and their organisations build power to fight against these trends, and at which scales.

¹¹ The ITUC (2018) thus claims that “80% of world trade and 60% of global production is now captured by the supply chains of multinational companies.”

c. Nuancing the neoliberal globalisation discourse

The material presented above describes concrete processes that clearly threaten workers' power and share of wealth. Yet, these discourses also portray neoliberal globalisation as solely integration for the worse whilst brushing over the matter of workers' agency regarding each process. Workers, "place-trapped" and inadequately protected by nation-states, increasingly compete with one another: any attempt to improve working conditions is met with the threat of relocating production, as footloose capital roams and scorches the earth seeking the cheapest labour force (Anderson, 2002; Bieler & Morton, 2014; Johns, 1998; Johns & Vural, 2000; Wills, 1998). Yet, scholars have shown that this polarised narrative displays several shortcomings.

First, it fails to understand the dialectical nature of capitalism: each produced space or scale acts as a barrier to new rounds of accumulation, calling for, in time, its destruction, replacement or reconfiguration in order for capitalism to survive (Harvey, 2006; Herod, 2001b). The changing role of each scale reflects this dynamic production of space. Capital is both place-bound and footloose, as a certain measure of "regime stability" is necessary to ensure profits (Castree et al., 2004). The very switch between fixity and motion provides capitalist development with the dynamism needed for its continuous reinvention, and from there, survival (Smith, 2008). The narrative of footloose capital thus ignores the "geographical correlative [of] place and immobility" (Jonas, 1996, p.326). Taylor and Bain (2008, p.149) explain that, "notwithstanding labour cost difference, capital is only *relatively* footloose." "Capital mobility" also simplifies the situation: productive capital might be moving, yet profits in many ways are more concentrated than before (Johns, 1998), and different types of capital are more or less moveable. By the same token, workers and workers' movements have always been mobile. From its birth, the trade union movement featured internationalist principles and created informal and formal structures to support solidarity between workers "over space" (Featherstone, 2012). Hobsbawm claims that, "traveling men [sic], emigrants and returned emigrants were the essence of early labor movements" (in Wills, 1996, p.357). Itinerant organisers and militant unions embodied ideals and translated them across places to inspire activism; used distant examples to unearth organising opportunities (Wills, 1996); disseminated union models through colonial geographies (Evans, 2010; van der Linden, 2008); and connected radical movements across borders (Featherstone, 2005b).

The second limitation of this narrative is that it is placeless and ahistorical, exaggerating the contrast between before and now. Rodrik (2011) emphasises that capitalism has always sought to enhance processes of exchange and connection, whilst Dicken (2004) adds that the brief period of high union density and high wages and benefits for workers may be overemphasised. Whilst the Fordist-Keynesian era featured the support of sympathetic states, this was far from the case everywhere, even in the imperial heartlands, and gains resulted from struggle, they were not a given (Evans, 2010; Munck, 2010).¹² Dicken (2004) argues that it is important to analyse the specific shifts which neoliberal globalisation entails, rather than to romanticise the past as a foregone Golden Age. He claims that failure to do so would represent a disservice to theory as well as to union practices, erasing the fact that union rights had to be won (Munck, 2010).

Third, under neoliberal globalisation, states continue to host circuits of accumulation, accountability and contestation (Robinson, 2012). Even as TNCs cut across state boundaries, the absence of international regulations means that states still enable the presence of TNCs on their territories and regulate the relationship between workers and employers (Henderson et al., 2002; Rainnie et al., 2011). Swyngedouw (2004, p.32) claims, “without territorially organised political or institutional arrangements that regulate markets, money and ownership [...], the economic order would irrevocable break down.” Whilst criticising the state, neoliberalism has hardly accomplished its promised dismantling and thus, “equating neoliberal globalization with the loss of the state as ally [to labour] is a dubious proposition” (Evans, 2010, p.356). Rather, neoliberalism re-invented the state’s relationship to the private sector and ensured that the state would actively engineer the conditions for neoliberalism’s expansion (Aalbers, 2013; Peck and Tickell, 2002). This is a “*qualitative reorganization* of the structural capacities and strategic emphases of the nation state” (Dicken et al., 1997, p.162). These critiques expose how the term globalisation is “enmeshed with a web of discourses” (Dicken, 2004, p.6) and has become a pervasive and self-invoking term, which Harvey (2006, p.xx) claims, “conveniently disguises class relations.” Swyngedouw (2004) agrees, holding that the term functions as an ideological screen to marginalise the social and spatial

¹² In no way was the Fordist model a natural help to unionisation. Neilson and Rossiter (2008, p.56) show that between 1903 and 1941 Ford firms themselves were characterised by, “Speed-up, armed security guards, shop floor spies, physical intimidation and external propaganda [which] were all part of the method employed by Ford to cut workers’ contact with their peers and bind their labour to a pre-ordained tempo set by the factory’s machinery.” They argue that it was only working class revolts and organising which brought Ford to finally capitulate to the United Auto Workers union.

reshufflings and struggles neoliberalisation prompts and to depict workers as powerless, with Walker (1999) adding that workers' feeling of powerlessness is more the result of the political successes and economic failures of capital, rather than "globalisation's" ubiquity.

Fourth, Bieler et al. (2010) replicate the critique Herod (1997) levelled at Marxist geography. They argue that frameworks to analyse globalisation such as Global Commodity Chains (GCCs), Global Value Chains (GVCs) and Global Production Networks (GPNs) tend to outline the consequences for workers and unions rather than portray workers as actors with influence. The GPN framework, which most geographers adopted,¹³ was developed by Henderson et al. (2002, p.445) to *both* describe "the nexus of interconnected functions and operations through which goods and services are produced, distributed and consumed" *and* provide an analytic framework capable of "grasping the global, regional and local economic and social dimensions of the processes involved in many (though by no means all) forms of economic globalization." This approach aimed to describe the social processes organised across a range of scales, which bring different actors (states, corporations, labour) in multidimensional, multiscalar and embedded relationships to produce value, which is understood as goods, services and knowledge (N. Coe et al., 2008; N. M. Coe et al., 2004; Henderson et al., 2002). Cumbers et al. (2008a) argue that this framework conceptualises labour as a factor within the global production of value, and call for a greater understanding of labour agency. Since then, a number of scholars have called for incorporating labour into GPN analysis (N. Coe et al., 2008; Cumbers, Nativel, et al., 2008; N. Coe & Hess, 2013; Rainnie et al., 2011) (see Section 3).

Informed by and expanding these critiques, labour scholars have examined how, in a dialectical manner, globalisation and the concomitant technological revolution "may actually facilitate transnational solidarity, by connecting production processes across borders and thereby bringing workers into direct connection with each other" (Bieler et al., 2015, p.2; see also Evans, 2010; Herod, 2003a, 2001, 1997; Munck, 2000). Anner et al. (2006, p.10) argue that TNCs "create the space in which new contests over forms and structures of globalization occur," given that their workers may be more connected and hold greater strategic power due to the dominance of these companies over the global economy. Herod (2001, p.408) adds that a TNC's production process may be more vulnerable to disruptions because the

¹³ See the evaluation of each approach in Henderson et al. (2002), Taylor (2010) and Newsome et al. (2015)

“consequences of any particular event can be transmitted much further and much faster than ever before.” The research presented in this thesis contributes to the analysis of workers’ contestation of global capital and their attempts to practice international solidarity (Bieler, 2012; Bieler et al., 2015, 2010; Brookes and McCallum, 2017; Evans, 2014; 2010).

In this section, I grounded my research within labour geography, and used this perspective to analyse how neoliberalisation, globalisation and financialisation have challenged trade unions’ power, setting the background to the assaults on their rights and power that workers face. Yet, I also showed how recent scholarship suggested that these processes may open up renewed possibilities for labour internationalism, as one way to respond to the challenges prompted by neoliberal globalisation. My research contributes towards understanding these possibilities, by analysing, in one company, how workers’ organisations negotiated the challenges and opportunities introduced by greater interconnectedness and the financialisation of production, and whether they were able to use these factors to increase their power and build greater feelings of solidarity across their company.

2. Understanding labour's agency

According to Greer and Hauptmeier (2009, p.77), international labour solidarity is “the spatial extension of trade unionism through the intensification of cooperation between trade unionists across countries using transnational tools and structures.” This definition highlights the simple fact that international solidarity relies on individual unions. Brookes (2013a, p.26) similarly emphasises that the presence of a transnational union network “has little impact on power relations within firms, [rather] what matters is the ability of unions participating in such alliances to tap their locally- and nationally-scaled powers.” However, despite the centrality of workers’ agency to labour geography, Castree (2007, p.858) claims that labour studies often fail to specify this concept which becomes a catchphrase for “any instance in which some group of workers undertake any sort of action on behalf of themselves or others.” To answer this critique, Coe and Jordhus-Lier (2011, p.8) draw upon Katz (2004) to argue that workers’ agency reflects “strategies that shift the capitalist *status quo* in favour of workers” through resilience, reworking and resistance.¹⁴ This classification focuses on the *goals* or *outcomes* of agency and, with a union’s lenses on, it does not explain what unions’ power *is*. To answer Castree’s (2000) call to define labour agency, my work draws on the Power Resource Approach’s (PRA) concepts of associational, institutional and coalitional power.¹⁵ I review this approach and then discuss Brookes’ (2013a) work, which introduces the concepts of inter- and intra-union power. Her attention to workers’ ability to organise together brings me to review the literature on class formation, socio-spatial positionality and crucially unions’ varied ideologies. I conclude by showing how these concepts inform the understanding of international labour solidarity.

a. Workers’ agency through trade unions

The Oxford Dictionary of Human Geography defines agency as the “potential and actual ability of individuals and institutions to affect the circumstances that structure their thought and action” (Castree et al., 2013). This definition highlights that agency

¹⁴ *Resilience* refers to strategies to survive, cope and get by; *reworking* to efforts to improve the conditions of their existence; and *resistance* to direct challenges to capitalist relations. These categories account for the range of ways workers have agency beyond unions (Carswell & De Neve, 2013), though they fail to encompass the more covert and gradual aspects of resistance in situations of repression and rapid change (see Scott, 1985).

¹⁵ Labour studies increasingly draw on these concepts of power to analyse specific unions and their strategies (Coe and Hess, 2013; Newsome et al., 2015; Rainnie et al., 2013; Selwyn, 2009; Wad, 2013; Zajak et al., 2017).

is a potential available to people rather than just an outcome and that it is about power (Brookes, 2013b). Dahl (1957) defines power as the ability of an actor A to make another actor B do something B would not otherwise do. For Dahl (1957), this capacity varies according to the basis of A's power, to the means A uses and the scope they mobilise, and to their public. However, in addition to power over oneself and someone else, power takes indirect forms. It is A's ability to affect B's decisions in a conflict through defining the very scope of issues considered (Lukes, 2005) and protecting them or how they are framed from being questioned (Scott, 1985). This face of power is core to the literature on discourse, hegemony and ideology, which argues that specific ways of seeing the world may become hegemonic, and in so doing, may encourage people to agree to the status quo and limit their capacities to challenge it (Lukes, 2005). Yet, if these authors define power, they do not provide a typology of power's *basis*, i.e., what is the source of this power, a question I examine for labour.

Wad (2013, p. 52) defines labour agency as "more or less deliberate attempts by rank and file employees and their organisations and networks to influence the outcome of the interactions between labour and capital, state or civil society organisation." Again, this definition does not specify the ways to achieve such outcomes. The PRA, which was developed in the 1960s to analyse working class struggles and the types of power yielded through collective mobilisation, provides such a typology (Schmalz et al., 2018). From the 2000s, the PRA embraced Wright's (2000) distinction between workers' *structural* and *associational power*. *Structural power* is comprised of two strands: workers' marketplace and workplace power. Marketplace power stems from the supply-and-demand relationship in a labour market: workers with desirable skills or in a buoyant market may be able to negotiate favourable contracts. This correlates with geographers' emphasis on the importance of local labour markets in shaping workers' ability and desire to improve particular workplaces (N. M. Coe, 2000; N. M. Coe & Kelly, 2000; Jonas, 1996). Workplace power results "from the strategic location of a particular group of workers within a key industrial sector" (Wright, 2000, p.962). These workers may be able to disrupt production to pressure their employers to heed to their demands. Lastly, *associational power* refers to "the various forms of power that result from the formation of collective organization of workers" (Wright, 2000, p.962), such as unions, labour movements or political parties.

Burawoy (2010, p.303) however criticises the PRA for being overly optimistic in assuming “that labor is always interested in resisting exploitation and its success depends on its capacity” to mobilise, that is upon workers’ ability, rather than *desire*, to resist their situation. Birelma (2018, p.217) contends that PRA should be “complemented with an analysis of [workers’] subjectivities,” and adds that analysis should focus on workers *and* unionists, who, “just like workers, [...] can also have a wide range of different intentions and motivations other than merely organising and class struggle.” Brookes’ (2013a) reworking of Wright’s definition of power addresses these critiques. She argues that Wright’s categorisation does not distinguish an organisation that merely exists from one able to influence other actors and that *decides* to use this power. She suggests instead that

[Associational power] is the ability of [union leaders] to compel the other members of their organisation to do something they otherwise would not do – in this case, to behave as a collective actor. [...] Associational power is a capacity embodied [...] in the workers themselves and how they relate to one another. (2013a, p.256)

She outlines how this power is required between workers – “intra-union power” - but also, especially in international coordination, between unions – “inter-union power” (Brookes, 2013b, 2013a). Her notions of intra- and inter-union power are important because they provide ways to account for the importance of workers’ belongings and subjectivities which, Smith (2000, p.1019) claims, Marxist geography “most glaringly failed to embrace” and treated “as a virtual black box.” I next review the literature on workers’ multiple belongings and loyalties, as well as the varied ideologies, which characterise each union’s efforts to unite workers, and the impacts of these differences on inter-union power.

b. Inter-union power: making class possible

Silver (2003) explains that Marx, in his revolutionary dream of international labour solidarity, downplayed the reality that whilst for capital, workers are interchangeable and abstract components, this is not the case for workers themselves. History simply demonstrates that workers may not develop a common class consciousness despite experiencing similar processes of exploitation and alienation; that class may not be their primary source of identity; and that workers may undermine other workers’ rights to protect themselves from the threats they believe they face (Gibson-Graham et al., 2000; Munck, 2010; Offe, 1985; Silver, 2003; Wills, 2008a). To explain this disjuncture, Bieler (2012), in summarising existing literature and drawing upon an older Marxist distinction, emphasises the need to distinguish between a *class-in-*

itself, and a *class-for-itself*, as a political process whereby workers articulate their experiences and struggle for their interests. Whereas the former mechanically results from one's location in the production system, the latter is not guaranteed. It is produced and practiced as people handle their experiences of work and contest them, a process which "is defined by men [sic] as they live their own history" (Thompson, 1972, p.11). Braverman (1974) similarly claims that class-consciousness, rather than resulting from a specific body of people, stems from a social process whereby people struggle together. This distinction stresses that workers are both abstract labour, the source of value under capitalism, and sentient beings, whose identity is multidimensional and whose commonality is to be *made* (Rainnie et al., 2011).

This emphasis on class as a process informs Gibson-Graham's (2006) anti-essentialist approach to class.¹⁶ They suggest that class is a set of processes and relationships involved in the production and distribution of surplus labour, rather than a given location. Their approach forms part of a broader post-structuralist feminist critique, which challenged Marxist analysis for neglecting nonworkplace-related forms of value production and for upholding class as the sole "difference that matters" (Katz, 2006; Wills, 2008b). Drawing on the concept of positionality, which Haraway (1988) introduced to recognise and ground the distinct identities and experiences that shape people's perspectives of the world, feminist scholars questioned whether an abstract consciousness divorced from people's realities exists and if workers share a single and common experience of work (Wright, 2006). They suggested that, instead of class acting as the principal identity for people, workers hold multiple sources of identification, such as gender, age, caste, religion or ethnicity, and they demonstrated how these shape people's work experiences, access to employment and practice of class politics (Ettliger, 2002; Jepson, 2005; Leitner et al., 2008; Lund-Thomsen, 2013; McDowell, 1999, 2009; Milkman & Voss, 2004; B. E. Smith, 2015; Tufts, 1998; Wills, 2008a). Doucette (2010, p.150) adds that workers' positionalities also shape how valuable they are perceived to be, explaining that labour's value "[results from] power relations that strategically value and devalue the work of different social subjects." Importantly, Silver (2003) emphasises that states, capital *and* workers draw upon, (re)produce and co-construct these varied identities. For instance, local labour policies may reinforce workers' different legal status (Elias, 2009; Kelly, 2001) whilst corporations may use social and cultural

¹⁶ Gibson-Graham et al. (2000, p.24) draw upon Resnick and Wolff's definition, according to which "*essentialism* mean(s) a specific presumption [...] that any apparent complexity - a person, a relationship, an historical occurrence, and so forth - can be analyzed to reveal a simplicity lying at its core."

relationships to co-opt workers (van der Linden, 2008) and/or base their employment decision on stereotypical understanding of gender (Jenkins, 2013; McDowell, 2009).

In acknowledging workers' multiple belongings, scholars have highlighted the contradictions which pull workers apart from each other, and geographers have particularly emphasised the importance of people holding deep loyalty to specific places (Escobar, 2001; Rainnie et al., 2007). Summarising existing scholarship and a plain reflection of reality, Lier (2007) notes that the need to survive may bring workers to collaborate with management and ensure that a company stays profitable in a particular place. This consideration nuances the "assumption that [the interests of labour and capital] are irreconcilably and diametrically antagonistic [...] [because] at the level of the enterprise, the interests of employees and employers may be very tightly intertwined" (Grint, 2005, p.93). This attention to workers' spatial belongings further deconstructs the monolithic category of class, allowing for cleavages between workers depending upon their location. Herod (2003b, p.519) states this allows one to recognise that "it is not just conflicts between capital and labour that shape the geography of global capitalism but also those between different groups of workers who might have quite different spatial visions for the future." Herod's claim does not ontologically oppose space and class, rather he outlines the importance of understanding class as a "set of place-specific" relationships (Castree et al., 2004, p.6) and I review the concept of "spatial dilemma" which accounts for such tensions in Section 3. I recognise that, in lumping Herod's (1997; 2003b) emphasis on the spatial aspect of class with a feminist anti-essentialist approach, I smooth over strong debates within geography. However, my work demonstrates that these approaches overlap in emphasising the importance of workers' socio-spatial positionalities, a term suggested by Leitner et al. (2008) to consider people's multiple identities and stress that these are relational, unequal, context- and place-shaped *and* open to being negotiated. Throughout this thesis, I draw on this concept to show that workers' multiple identities shaped their ability and desire to *make* class politics possible locally and, demonstrating the nested aspect of scale, unions' ability to develop inter-union power internationally.

c. Politicising class: the work of ideology

Wills (2008a, p.308) argues that an anti-essentialist understanding of class further brings attention to the importance of *politicising* class relationships, through "deliberate intervention in the battle for hegemony in political life." This perspective

restates the fact that working-class organising from its origins was based on attempts to reframe workers' experiences in order to politicise them, rather than reflecting a mechanical reaction to objective conditions. Offe (1985) suggests that the politicisation of class relies on the principle that collective action and solidarity can prevent or mitigate the exploitation of individual workers, or simply that “the union makes us strong.” Lindberg (2014) argues that the creation of this solidarity stems from people naming and recognising mutual interests and developing feelings for and identification with each other through shared values and experiences. Thus, solidarity is both about individual experiences through which workers recognise their mutual interests and about articulating these within a broader value system. Rosanvallon (1988, p.89) for instance, stresses that French unions built a cohesive identity by developing and upholding “a community of values and ideas which aimed to promote alternative visions of society.” This echoes Thompson’s (1972) discussion of how a communal value system originated from struggles to uphold a moral order which sanctioned the blackleg, reframed an injury to one as an injury to all and encouraged collective values. Unions thus built a specific ideology, following Hall’s (1986, p.26) definition of ideology as

The mental frameworks - the languages, the concepts, categories, imagery of thought and the systems of representation - which different classes and social groups deploy in order to make sense of, define, figure out, and render intelligible the way society works.

Thompson (in Scott, 1985, p.1) explains, “every class struggle is at the same time a struggle over values,” to define what ought to be, over what exists. Above, I showed that the definition and control over what is deemed to be common sense is crucial to exercising power. Politicising class is thus about recognising mutual interests and contesting the dominant ideology to make space for other ideologies which can sustain class politics. This perspective reiterates Brookes’ (2013a) argument that associational power needs to be *created* and it stresses the crucial ideological work to *make* class politics possible. This raises questions about how unions will conceptualise building power, and at which scales such identification and solidarity arise and who it will encompass. Castree (2007, p.860) argues that these “moral geographies,” defined as “sets of values relating to modes of conduct towards other people near and far,” deserve analysis in their own right. They shape the scope of workers’ concern or indifference. Wills (2008a) adds that understanding how this ideological work of building commonality and narratives of justice is done, not only matters regarding workers’ geography of care but is also crucial to the repoliticisation of class, as a *process*. In my study, I analyse the difficulties unions

encountered when trying to promote worker solidarity at a range of scales, and how they overcame them.

Just like workers, scholars also show that unions' values are historically placed and varied. Jonas (1996, p.333) explains, "the economic and political strategies of unions have been tailored to locally variant class structures, gender and race relations, and political institutions" and, as a result, unions have developed "distinctive regional and local cultures of unionization." Some unions believe that their role is to represent their members' specific interests, others set out to be social partners within institutionalised bargaining procedures to secure a "fair" return for workers. Some unions focus on ensuring satisfactory employee-employer relationships and some aim to act as vehicles for class struggle, aiming for the general emancipation of workers (Hyman, 2008; Lillie & Lucio, 2004; Rosanvallon, 1988). This highlights the simple fact that unions do not defend all workers and, that in practice, many unions have facilitated the reproduction of inequalities (Coe and Jordhus-Lier, 2011). Barker notes that, throughout history, unions have represented particular workforces and have been "agencies of both struggle for and containment of workers' demands" (in Bieler, 2015, p.24). Given Castree's suggestion that unions' values are core to the scope of workers' solidarity, I now show that unions' ideologies matter because they inform international solidarity practices and because international solidarity activities may promote some interests above others.

At the local level, scholars show that some unions have colluded with management to secure ongoing production and discourage grassroots involvement which could threaten stable labour-management relationships (see Bergene, 2010; Cumbers et al., 2008a; Giraud, 2013; Lier, 2007; Milkman and Voss, 2004; Moody, 2007; Offe, 1985; Pernot, 2013). Yon and Bérout (2013) emphasise unions' duality: they play a key role in resisting some aspects of capitalism *and* are instrumental in domesticating workers' claims, to ensure the reproduction of the factory order. Importantly, the choice by unions to collude with management or resist it also reflects the impact of corporate strategies and discourses to secure workers' and unions' participation in the production process (Brookes, 2013b; C. Brooks, 2016; Giraud, 2013; Hauf, 2017; Hennebert, 2010; R. C. Rose et al., 2011). Hammer and Riisgaard (2015, p. 85) stress that these dynamics transcend the local scale, arguing that the "outcomes of management-labour relations have implications for dynamics of cooperation and competition between [...] different groups of workers." Hennebert (2010, p.57) illustrates the consequences of such multiple scalar belongings, explaining that one of the difficulties of transnational unionism is that

Trade unionism, behind a unifying discourse which proclaims shared common goals, notably the particularly large and vague goal to defend workers' interests, is composed of organisations with different structures and very diverse ideological orientations.

My research builds on these claims, analysing how such ideological differences, informed by unions' local contexts and relationship with management, weakened unions' collaboration.

In addition to the ranges of stances held by unions locally, their practices of international solidarity are not an unalloyed good. Silver (2003, p.22) argues that since workers are pitted one against the other and "precisely because the ongoing unmaking and remaking of working classes creates dislocations and competitive pressures on workers, [workers may] draw nonclass borders and boundaries as a basis for claims for protection from the maelstrom." This happened and happens across scales to protect perceived local and national interests. For instance, Cumbers et al. (2008a, p.374) argue that the national social compromises Northern unions entered into during the 20th century led unions to privilege white male industrial workers "at the expense of nonunionized workers, females and ethnic groups both at home and abroad." National unions have also used international labour institutions and practices to promote their members' interests, notably through supporting protectionist policies or undermining radical trade unions (Brooks, 2007; Johns & Vural, 2000; Scipes, 2016; Wills, 2001). Acknowledging such diverse practices of international solidarity brings Johns (1998, p.256) to distinguish between "transformatory" solidarity, defined as altruistic actions by workers with the sole intent of helping other workers, and "accommodationist" practices, where workers act in a way "not to transform social relations but to accommodate them while reasserting the dominance of a particular group of workers within capitalism's spatial structures." Greer and Hauptmeier (2009) provide a more nuanced appreciation of this dichotomy, arguing that, by bringing people together, accommodationist solidarity practices over time might enable greater identification between union representatives. They recount how, as restructuring of production and deregulation hit automobile workers in Europe, at first, national interests undercut unions' actions. However, they show that, over time, through what the authors name "identity work," unions built a common European identity and confronted GM's whipsawing strategy. Introducing this temporal element to solidarity practices tempers Johns' suggested dichotomy, because "rather than emphasising the simultaneously reciprocal nature of solidarity [it] can be more useful to see this mutuality constructed across time" (Kelliher, 2017, p.109). These reminders of the slow work of *building* a common

vision and shared demands, as well as the reactionary impulses which may fuel international solidarity, inform my analysis of ST unions' international collaboration. Further, international solidarity efforts may not be consciously regressive but they may undermine union radicalism by promoting specific practices which deny or minimise the structural inequality between workers and their employers.¹⁷ Yon and Bérout (2013, p.154) articulate the danger of forgetting such structural differences, as for instance "social partnership" practices may "lead to, under the guise of neutrality, the reproduction of inequalities [between workers and their employers]." Hauf (2017) argues that international campaigns which export rules for social dialogue may end up favouring unions subservient to companies and gloss over the power imbalances which structure national industrial relations. For instance, during the Play Fair campaign that targeted football manufacturers in Indonesia, Hauf (2017) argues that the integration of left-wing unions "into multi-stakeholder negotiations force[d] them to speak the language appropriate to that arena and adopt more moderate strategies" (p.996) and this in fact "delegitimiz[ed] more radical strategies of industrial action — even though the latter have been more effective in terms of raising wages and improving working conditions" (p.988). Brooks (2007) similarly criticises the transnational coalition of NGO and unions against sweatshop conditions for garment workers, which, under the goal of supporting women's and children's rights, made white consumer bodies of the Global North the principal actors of the campaign. These authors thus stress the importance of understanding each local context and assessing whose agency is foregrounded within transnational campaigns. Whilst Castree (2000), Bolsmann (2010), Birelma (2018), Brooks (2016) and Hauf (2017) are amongst the rare studies which analyse how unions' cultures informed international campaigns, they do not study the labour-management relationships in each site or the corporate strategies workers faced. As a result, they are less able to ground each union's ideology in its context and assess how such local contexts further shaped international efforts. My study addresses this gap, by analysing how unions' ideologies, understood as shaped by national laws and local managerial tactics, as well as their representation of the international both supported and challenged their capacity to act at the international level.

¹⁷ For example, Brookes (2013) recounts an encounter between Swedish and Columbian union representatives. The former attempted to convince the latter of the value of social dialogue, which just did not apply to Columbia given the violent repression organised workers face.

d. Structural, institutional and coalitional power

Brookes (2013a) claims that associational power forms the prerequisite to exercise other forms of power: unless workers are organised collectively and recognise common interests, they often will not be able to exercise other forms of power, or will do so only passively. She outlines three other forms of power: *structural power* – as defined by Wright (2000), *institutional power* and *coalitional power*. *Institutional power* is the capacity by unions to leverage existing institutions and laws or to create new ones to influence a company's behaviour. Institutional power is uneven, often reflecting "the contingent outcomes of past battles between capital and labour" (Cumbers et al., 2008a, p.375). *Coalitional power* stems from the recognition that workers are also community members, consumers, and citizens. Unions exert coalitional power when they coordinate their activities with other unions, notably at the international level (Brookes, 2013b; Lier, 2007), or when they extend the scope of a struggle to affect the outcome of their dispute, for instance drawing on alliances with political representatives or other community groups (e.g.: Ellem, 2003; Johns and Vural, 2000; Sadler, 2004b; Tattersall, 2009; Tufts, 1998; Wills, 2008a). Unions' ability to exert coalitional power relies notably upon the work of creating common interests with diverse constituencies (Brookes, 2013a), and my research analyses how ST unions managed to create common interests with other unions and public office holders to leverage greater power over their employer.

The concepts of power I introduce in this section stress four crucial points. First, power is relational. This is key to labour geographers' reminder to see labour agency as embedded in specific places, times and relationships. Second, unions' power depends on workers, but this power relies on *building* workers' willingness to act together (Brookes, 2013a). This points to the crucial work of what Wills (2008a) calls "politicising class," which relies on workers recognising and building common interests and values, for there is potentially a significant gap "between workers' objective potential power and their subjective ability, or willingness to act" (Taylor and Bain, 2008, p.150). Third, amidst the uneven and competitive landscape of capitalism, workers are torn by different loyalties, they have access to and choose different tactics, and may attempt to reach a comparatively better position by colluding with capital at a range of scales. Cumbers et al. (2008a, p.373) argue, "the antagonism of cooperating and resisting capital accumulation will vary widely between subjects [...] contingent on their positionality." They add, "[unions'] strategies at both [the] national and transnational scales are subject to the same

schizoid relations of domination and resistance as any other capitalist form” (p.374). As Herod (1997, p.3) stresses, workers’ collective organisations reproduce workers “*as workers in a capitalist society*” which entails them making hard choices. My research analyses how workers’ socio-spatial positionalities shaped their ability to create inter- and intra-union power and how local union-management relationships and union cultures shaped unions’ international solidarity efforts. My research demonstrates the continued “nested” aspects of scalar relationships, but also workers ability to work through the differences prompted by their diverse experiences and the divisive tactics upheld by management.

Fourth, union power is shaped by temporal and spatial dimensions - whether local labour market dynamics regarding structural power, national legislation regarding institutional power or scalar relations regarding coalitional power. As a result, unions’ powers depend on *where* and *when* workers organise. Herod (2003a, p.117) argues that a sensitivity to spatial matters “can help to understand workers’ praxis” because “workers’ social practices are shaped by their spatial contexts and [in turn], their spatial practices play an important role in structuring the evolving social and spatial relations of capitalism.” Throughout this section, I showed that workers’ *and* unions’ spatial identity informs their ability to organise with other workers and unions. Taking the importance of workers’ spatial and temporal contexts seriously requires the category of “labour” to be embedded within its geographies, and it is to this literature that I now turn.

3. Embedding labour

Coe and Jordhus-Lier (2011) and Mitchell (2011) warn that labour geography has potentially overemphasised labour's agency at the expense of a realistic analysis of the political and economic structures which limit workers' organising. Workers' agency in Herod's (1997) account is determined by history and geography, evoking Marx (1852):

Men [sic] make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past. The tradition of all dead generations weighs like a nightmare on the brains of the living.

“Determined” does not imply that results are already known and can be predicted, but rather that situations and struggles have histories and geographies which set limits and exert varying pressures on how struggles develop (Williams, 1973). Mitchell (2011) notes that labour scholars often forget this cautionary reminder, driven by the desire to place workers at the centre of analysis. He urges geographers to go beyond stating the possibility of workers' agency and to examine capitalism as it actually develops and is, that is, to assess *labour's geography*. By this, he means to examine the *conditions* under which workers' agency is possible and to engage with the places and times when labour “is largely incapable of shaping, ‘through its actions, the geography of capitalism’” (2011, p.565). In a similar vein, Coe and Jordhus-Lier (2011) suggest that studies should analyse the structural and social contexts workers are embedded in, notably the GPN and state with which workers interact. Understanding labour agency as constrained revives the debate opposing structure with agency, which saw structuralist positions confront poststructuralist ones over how to understand the labour process, who shapes it, and how to represent it. Following O'Doherty and Willmott (2001, p.459), I attempt to hold onto both: namely, “how relations of capital and labour are practically accomplished and challenged at the point of production” and analyse how these relationships are shaped by political and economic processes in the context of uneven power relations (Coe and Jordhus-Lier, 2011; Thompson, 2010). Here, to introduce key notions regarding “embedding” labour, I review existing literature on the temporal and spatial dimension of workers' agency and on the role of workers' belonging to specific GPNs and states, both of which, I acknowledge are also distinct spatialities and shape workers' power as such.

a. The temporal dimensions of labour agency

Coe and Jordhus-Lier (2011) delineate four ways to understand the temporal dimensions of labour agency. They outline the significance of history and of business fluctuations – or time as *context*, the timing of actions – or time as *means*, the temporality of gains – or time as an *end*, such as decreased hours of work, less precarious employment or coordinated bargaining negotiations, and time as enabling the build-up of experience – or time as *process*. Grint (2005, p. 46) asserts for instance that “what may appear as irrational today, for example, trade unions demarcation disputes, may well reflect a pattern of work that was constructed to fulfil a real need at the time of origin.” Yet these inherited boundaries may now impede contemporary organisational efforts, as shown by the way the growing nationalisation of labour movements often constrained unions’ international efforts. However, memory of past experiences may also support workers’ struggles. Traditions of organising, whether family or place-based, stories of resistance, and experiences of political repression make up a repository of values and resources which can sustain workers’ actions and support cultures of solidarity (Carmichael & Herod, 2012; Kelliher, 2017; Mitchell, 2013; Rainnie et al., 2007; Wills, 1996). The temporal framing of workers’ struggles matters. Whether a union negotiates collective bargaining agreements annually or tri-annually shapes how activists organise and might constrain their demands (Holmes, 2004). Drawing on the automobile workers strike in Flint in 1998, Herod (2000) show how the smaller inventories companies hold under Just-In-Time production mean that the consequences of any particular event are transmitted much faster than before, and this increases the structural power of “well-situated” workers (see also Banks and Russo, 1999; Selwyn, 2009).

Temporal considerations may also be part of a company’s arsenal to impede workers’ organising. For instance, companies’ anti-union strategies may differentiate between workers based on their temporal status, whether portraying workers as “impermanent” to reduce their wages (Wrights, 1999) or using precarious workers against the more permanent workforce (Brooks, 2016). The difficulty of organising seasonal workers, workers in the hospitality sector, or migrant workers stems in part from their impermanence. It is harder to collect their details; harder to persuade them of the value of long-term changes, of complaining about problems, and of unionisation; and harder for them to develop long-term ties to a place and to learn from their struggles (Alberti, 2014; Gunawardana, 2006; Kaine & Josserand, 2018; Kelly, 2001;

Wills, 2008a). Finally, time is a source of discursive framing. Brookes (2013a) argues that whether an issue is one of everyday concerns, of immediate urgency, or one that provides more abstract long-term benefits, shapes the possibility of organising around it. Such a temporal imagination is crucial in international campaigns, because workers often perceive international organising as separate from everyday concerns and as instead a long-term goal which does not answer their short-term needs (Featherstone, 2012). Further, organising international interactions requires resources and commitment, both of which may be sapped by quotidian or urgent needs (Hennerbert, 2010). Coe and Jordhus-Lier (2011, p.220) argue, “There is also a lot to be learnt about the *temporal* aspects of labour agency,” which the discussion above sought to illustrate. They add, however, that “this point is often understated in the literature.” This thesis enhances the understanding of the temporal dimensions of trade union agency at a number of scales, by examining how ST migrant workers’ legal status fragmented the workforce, how workers and unions used memories of past practices to challenge current ones and how unions negotiated building long-term goals to sustain their collaboration across borders.

b. The spatiality of labour’s agency

The *spatiality*¹⁸ of Global Justice Networks concerns both “the geographical context in which they operate and the strategies they employ” (Routledge and Cumbers, 2009, p.76). In a similar fashion, I understand space as what shapes workers’ struggles and as a resource they may use to further their agendas. Leitner et al. (2008) identify five spatialities to account for the ways that contentious politics within social movements are practiced: *place, scale, networks, mobility* and *socio-spatial positionality*. Here, I focus on the notions of scale, place and network, because labour geographers who analysed union internationalism initially focused on scale, and have only recently examined the significance of place and networks, whilst I reviewed the importance of analysing workers’ socio-spatial positionality above.

Marston and Smith (2001, p.615-616) define scale as “a produced societal metric that differentiates space [which] is not space *per se*.” By this, they mean that scale is a “level of representation” (Marston, 2000, p.220) which is crucial to the organisation and production of space but which does not constitute space in itself. Swyngedouw (2004, p.33) claims that scales are neither natural nor permanent: they

¹⁸ According to Castree et al. (2013), spatiality “denotes socially produced space, [...] [it] recognizes the roles people play in creating space and the interaction between space and human action.”

are “perpetually redefined, contested and restructured in terms of their extent, content, relative importance, and interrelations.” Scalar thinking emphasises that each scale interacts with processes happening elsewhere, as I suggested above. Ellem (2006, p.383) thus explains that one cannot understand “the nature of and prospect for local action at the local scale alone” and, conversely, that global phenomena take shape in place (Massey, 1991). Whilst the “scales debate” of the early 2000s proposed so-called “flat scalar ontologies” (Johns III et al., 2016),¹⁹ most labour geographers hold onto a notion of scale conceived as set of nested and complex relationships (Coe and Jordhus Lier, 2011). They argue that workers’ scalar embeddedness can provide (or deny) them economic, political and cultural resources to support their organising (Carmichael & Herod, 2012) and emphasise that scalar configurations result from continuous struggles (Rainnie et al., 2011).

Determining which scale is entrusted with legitimacy and power is a contested process that may benefit some workers at the expense of others, or companies at the expense of workers (Castree, 2000a; Ellem, 2006; Holmes, 2004; Lier, 2007; Merk, 2009; Mitchell, 1998). Castree et al. (2004, p.213) argue that unions are inherently “scale constructing actors” who aim to negotiate at the widest scale possible to level working conditions, wages and benefits and curb employers’ power to whipsaw workers in different places against each other (see also Ellem, 2005; Herod, 1998; Merk, 2009; Rainnie et al., 2007). Through the changes unleashed by neoliberal globalisation, corporations are increasingly able to whipsaw workers and states, leveraging the threat of relocation to extract profitable concessions from local unions and governments, which tumble over each other to offer the most competitive wages, generous subsidy packages or less stringent regulations (Bieler et al., 2010; Holmes, 2004; Hyman, 2001; Jonas, 1998; Rainnie et al., 2007; Sweeney & Holmes, 2013).²⁰ This is a reminder that labour agency takes place in an unequal field: multinational companies are “better able to coordinate [their] bargaining agenda transnationally than unions are, and often use this ability to pressure local worker representatives” (Lillie and Lucio, 2004, p.163), whilst workers’ ability to negotiate at favourable

¹⁹ I do not get much out of such ontologies and seem to share this sentiment with other labour geographers (Coe and Jordhus Lier, 2011). However, I value critiques to the concept of scale which highlight the importance of the spheres of reproduction and consumption and demonstrate that the creation of scale is shaped by people’s socio-spatial positionality (Marston, 2000; Marston & Smith, 2001).

²⁰ The rise of areas where national regulations do not apply or are suspended, such as Special Economic Zones, and areas managed through special industrial relation departments, often at the expense of workers’ right to organise, illustrates in very concrete terms *how* neoliberal globalisation produces scales that are unfavourable to workers’ rights and organising (Carmichael & Herod, 2012; Gunawardana, 2006; Kelly, 2001).

scales is undermined by neoliberal measures. This heightened competition fosters what Castree et al. (2004) call “spatial dilemmas” whereby what makes sense for workers in one place may undercut workers’ interests elsewhere. Scholars suggest that this is a dialectical phenomenon: as workers become more interdependent, they might both become more likely to act together and to compete with one another (Castree et al., 2004; Hennebert, 2010; Wills, 2001). Herod (2003a; 2003b) claims that research into how unions negotiate these dilemmas is crucial to the understanding of the possibilities for and limits of transnational solidarity, with Sweeney and Holmes (2013, p.219) adding that “the successful exercise of worker agency at one scale can undermine solidarity and foster competition between workers and unions at other scales.” My thesis illustrates the reality of these dilemmas in one TNC, and argues that finding common interests and having a global understanding of the company’s operation were crucial to unions negotiating them.

Above, I suggested that workers’ ability to bring conflict to another scale of engagement is a source of coalitional power. In geography, this capacity is termed by Smith (1992, p.60) “jumping scale,” referring to the ability to “organize the production and reproduction of daily life [at one scale] and [resist] oppression and exploitation at another scale.” As noted by Brookes (2013a) and Lier (2007), international solidarity activities reflect an instance of scale-jumping, as these practices seek to leverage workers’ power elsewhere to influence the outcome of a specific struggle. The idea of scale-jumping is implicit in the work of several labour sociologists, whether via the “boomerang effect” (McCallum, 2013) or “reverse whipsawing” (Evans, 2010). In addition to bringing other actors into a struggle and thus exerting coalitional power, Mitchell (1998) argues that scalar jumps also dispute the very definition of the arenas of struggle. The production of scale thus also results from ideological struggles that aim “to locate problems, causes and solutions at particular scales and to legitimise the exclusion of certain actors and ideas from debate” (Jones III et al., 2016, p.143).

As Smith (1992, p.62) suggests, “the use of spatial metaphors, far from providing an innocent if evocative imagery, actually taps directly into questions of social power.” The analysis of scalar jumps should thus attend to both the varying scales of struggle, and whom they benefit, but also how actors fight to redefine what is appropriate for them to have a say on, or the *scope* of an issue (Brookes, 2013a). For instance, Mitchell (1998) and Anderson (2012) show how companies may conjure metaphors of distance or proximity to counter unions’ goals and delegitimise union organisers as “outsiders.” Some international labour campaigns, in the same vein, harmed

corporate interests by disrupting assumptions around where practices are expected to take place, by bringing up workers' rights issues at a company's Annual General Meeting (AGM) (Sadler, 2004a) or in stores, where production issues are hidden from the consumers' view (Leitner et al., 2008).

In trying to formalise these broader scales of engagement over the last 30 years, unions have attempted to create new tools to regulate TNCs at the international level and undermine TNCs' whipsawing power. In Europe, unions have deliberately used the EWCs set up for European employees representatives to "overcome the asymmetry between centralized management and decentralized worker representation that was making whipsawing possible" (Greer and Hauptmeier, 2009, p.11). These remain weak tools, as the European Trade Union Institute (2017, p.5) notes, "it is clear that even once EWCs are up and running, practice shows that they are still rarely capable of really influencing the design or implementation of restructuring measures." In the maritime trade, the GUF has successfully instituted an international agreement on wages (Lillie, 2004). In other sectors, some GUFs and unions have brought TNCs to sign GFAs, drawing on firms' increasing attention to their image; extensive campaigns; existing industrial relation frameworks in Europe (Greer & Hauptmeier, 2009; McCallum & Fichter, 2015); and top-level pressure on shareholders (McCallum, 2013).

By contrast with unilaterally declared codes of conduct, which fall short in terms of guaranteeing trade union rights (Fichter et al., 2012), GFAs promise greater union involvement and the assurance that basic workers' rights are respected throughout a TNC and its supply chain. McCallum (2013) heralds GFAs as crucial to the securing of appropriate rules which allow unions to bargain for greater rights. However, given the lack of enforcement power in these agreements, McCallum and Fichter (2015) come to suggest that GFAs remain poorly effective and represent public relation exercises rather than instruments to enable the rise of independent unions. Whilst the literature has highlighted caveats about GFAs themselves, there is little attention to possible drawbacks with *the process* of pursuing a GFA. As my research demonstrates, such a process inevitably favours GUFs over grassroots leaders, instores a "charity" mindset to solidarity and stifles militant actions which, I claim, are crucial to building an effective labour internationalism. In other words, how each scale is imagined, who it encompasses and what it is used to achieve, matters.

Despite these developments, scholars increasingly question the relevance of workers "upscaling" their struggles (Castree, 2000; Herod, 2003b). Amidst the cry for

internationalising labour's campaigns (Bronfenbrenner, 2007; Munck, 2000; Waterman, 2001), Herod (2003b, p.511) warns that "it is not always necessary for particular groups of workers to engage in international solidarity campaigns to secure their goals." He cautions against claiming that unless workers' resistance is global, it will fail. Evans (2010) and Castree et al. (2004) agree, citing the fact that the international scale lacks the regulatory power of nation-states and that the national scale still offers workers the most protection and rights. For instance, Castree (2000) argues that the Liverpool dockers' failure to stop workers from being fired despite a vibrant international campaign between 1995 and 1998, was partly due to the lack of support from the national transport union, whilst workers' ability to withstand the months-long struggle was due to local organising and support. Similarly, Banks and Russo (1999) claim that the UPS strikes of 1997 were successful because each mobilisation articulated concerns related to local issues, rather than because all fought for the same demand. This work suggests that no one scale is inherently progressive or effective, but rather that unions should organise workers locally *and* facilitate strong national and international collaboration (Brookes, 2013a, 2013b). Ettliger (2002, p.836) argues that unions' ability to organise at a range of scales and "achieve *geographical* flexibility figures prominently in sustained effectiveness" (for examples see Anderson, 2015; Castree, 2000a; Evans, 2010; Herod, 2001). As Harvey suggests, "the choice of spatial scale is not 'either/or' but 'both/and' even though the latter means confronting serious contradictions" (in Leitner et al., 2008, p.160). The questioning of workers' upscaling strategies brings attention to the importance of place – understood as workplace, labour markets and local territory – in workers' struggles (N. M. Coe, 2000; Herod, 2000; Ellem, 2003; Mitchell, 2011). Rainnie and Herod (2011, p.163) suggest workers' relationship to place is dialectical: places act as arenas, where local and nonlocal rules, norms, customs and rights "interconnect to mould workers' and employers' behaviours, with such workers' and employers' behaviour in turn moulding the character of place." Several studies have analysed workplace dynamics and how these limited the rise of shared purposes between workers. For example, Ellem (2005) highlights how Rio Tinto used spatial tactics to create a union-free worksite and fragment workers through the use of fly-in/fly-out of workers. Kelly (2001) explains how companies *physically* excluded union organisers. McKay (2004) shows how companies strategically fragmented the workforce by placing workers across different housing units to prevent organising and Pun and Chan (2013) argue that the dormitory system foreclosed opportunities for organising at Foxconn.

Despite this attention to workplace dynamics, most studies of international campaigns do not engage with specific site strategies and realities, and whilst Banks and Russo (1999), Hennebert (2010) and Anderson (2012) emphasise the importance of local dynamics, they do not analyse the impacts of each union's culture and context. Ellem (2006) suggests that places are imbued with meaning, which may divide or unify workers, and privilege or exclude certain forms of politics. According to Wills (1998, p.35), place-based systems of relations may exacerbate unions' spatial dilemma *and* provide the basis for sustaining international campaigns as "communities where solidarity is tightly forged in place, on the basis of shared memory, traditions and experiences, are often those that are in the forefront of transpatial solidarity." Anderson (2015) likewise argues that intense single-site struggles may energise transnational campaigns, by enabling specific stories to become "resonant" globally and enthuse workers to organise in solidarity. Thus, Martin suggests that workers may not need to "throw off the 'shackles' of place to realise their 'real' social interests" (in Castree et al., 2004, p.80) and organise across scale. Rather, Cumbers and Routledge (2010, p.49) argue that the "question of *local ownership* is critical to the politics of transnational union solidarity" and that one should embed international solidarity within place-based struggles. My research shows the ways place-based dynamics both sustained and undermined international collaboration, as well as the difficulties encountered in creating local ownership of international efforts.

The matter of GUFs or international campaigns touches upon the last spatiality I mentioned, that is networks as ways for social movements to connect their various territorial struggles (Cumbers, Routledge, et al., 2008; Escobar, 2001; Featherstone, 2003; Juris & Khasnabish, 2012; Leitner et al., 2008; Tarrow, 1996). This spatiality is increasingly relevant to trade union studies and efforts: Brookes and McCallum (2017) argue that, following the rise of new information technology and the increasing ease of travel, network-based and decentralized forms of union activity have enabled the rise of a "new" labour internationalism. Their observation reflects the fact that, increasingly, unions have created transnational networks to share information and develop common strategies in an effort to complement what Evans (2010) describes as the "tree-like" bureaucratic structures of international unionism (see also Hennebert, 2010; Herod, 2003b; Wad, 2014). Certain GUFs have embraced this possibility and promoted the creation of company-based TUNs to add a layer of horizontality within unions' international relationships and build power at the scale of the companies themselves (Cumbers, Nativel, et al., 2008).

Yet, despite Cumbers et al.'s (2008a) hope that TUNs may facilitate greater solidarity amongst workers, few studies have examined TUNs' practices and none has featured an NGO.²¹ Zajak et al. (2017, p.902) claim that "internal dynamics in [labour] networks and their consequences have not yet been sufficiently explored" and, within transnational labour alliances, "it remains puzzling how these very different organizational structures, ideological backgrounds, interests and access to resources can be integrated and held together for a common cause" (p.905). Despite the horizontal imaginary they claim to follow, Zajak et al. (2017) emphasise that transnational networks are not egalitarian spaces, due to discrepancies in languages spoken, ideologies, resources or the ability to travel (see also Cumbers et al., 2008b; Featherstone 2003; Routledge and Cumbers, 2009). In addition, unions' international cooperation efforts are sites of contested relationships that involve power struggles between national and international structures. Grassroots workers and national unions may criticise the coordination by one GUF of an international campaign, whilst unions with greater financial and political resources may dominate a GUF's agenda (Brookes, 2013a; Cumbers and Routledge, 2010; Gordon and Turner, 2000; Rub, undated). National unions may also be reluctant to transfer power to the GUFs on the one hand or to grassroots levels on the other, which further complicates the involvement of shopfloor workers in international campaigns (Cumbers & Routledge, 2010; Wad, 2014).

In short, the literature on labour's geography outlines the importance of understanding the spatial and temporal dimensions of workers' struggles as constraining *and* empowering. Unions and companies materially and discursively struggle over these dimensions and each settlement shapes future interactions (Carswell & De Neve, 2013; Cumbers, Nativel, et al., 2008; Herod, 2003a). Coe and Jordhus Lier (2011) suggest that space and time act as *stages* which condition what is possible to achieve and workers' identities, as *means* unions use to advance their goals, and as the "*things*" workers may struggle over. My thesis shows the constraining effects of various temporalities and spatialities upon workers' organising efforts and how these unions worked to overcome them.

²¹ Although scholars have shown the importance of NGOs to combat the violation of workers' rights in the apparel industry (Johns, 1998; Anner, 2009; Armbruster-Sandoval, 2003; Rodriguez-Garavito, 2005), I have found no study examining the links between NGOs and TUNs in specific companies.

c. Global Production Networks

I now examine another aspect of *embedding* labour, namely attending to the relationships between workers, their company's GPN and their states. Whilst the GPN perspective is mainly applied to understand intrafirm dynamics and the web of relationships across a firm (N. Coe & Yeung, 2015), a rising number of studies have sought to "bring labour back in" to GPN studies and understand how a GPN perspective may inform the understanding of workers' agency (Cumbers et al., 2016; Luthje et al., 2013; collection by Newsome et al., 2015; Selwyn, 2012; Carswell and De Neve, 2013; Rainnie et al., 2013). Key concerns of this literature have been to analyse the broader political and economic canvas in which labour struggles take place (Cumbers, 2015); to analyse the uneven levels of workers' agency across a GPN; to reveal workers' potential spatial dilemma and connections (Coe and Jordhus-Lier, 2011); to examine how "social upgrading," i.e., workers gaining greater rights can take place (Barrientos et al., 2011); and the role of "local factors, such as gender, age and caste, and regional connections [...] in the shaping of GPNs" (Carswell and De Neve, 2013, p.62). This literature adopts a macro perspective singularly devoid of labour agency, which McCann (2013, p.241) finds has "rather little to say about labour management, workers and unions." For instance, even if Luthje et al. (2013, p.31) stress that their explicit goal is "to bring the labor process back into political debate," their study does not analyse workers' experiences. Despite recognising its importance, the issue of labour subjectivity is absent from "labour-conscious" GPN literature. My research bridges the descriptive GPN analysis of unions' varied power with Rathzel et al.'s (2014) account of workers' experiences within a TNC. This supports my argument that analysing unions' *stances* is crucial to understand how they work with the conditions they face, notably those related to the GPN in which they are embedded.

Whilst GPN analysis stresses the importance of sectorial dynamics in shaping territories (N. M. Coe et al., 2004; Henderson et al., 2002), this attention remains at an abstract level. Labour studies, by contrast, have shown how sectoral differences inform workers' power and "condition the problems that emerge and the solutions cooperating unions find plausible" (Anner et al., 2006, p.11), thus emphasising that they shape workers' local power and their ability to collaborate. Geographers have demonstrated that workers' agency is shaped by features such as the organisation of production (Herod, 2003); the capital requirements of production (Anner, 2003; Ellem, 2003; Silver, 2003); the type of value produced (Anner, 2003); whether the

production is producer-driven (e.g.: automobiles), buyer-driven (e.g.: apparel industry) or export-driven (Selwyn, 2009); the type of goods produced (Mitchell, 2011; Selwyn, 2009); and the health hazards associated with the industry (Nang and Ngai, 2009). They add that companies' capital requirements inform how easily sites might be offshored, and workers' opportunities and desire to build long-lasting organisations locally and international collaborations (Anner, 2003; Brookes, 2013b; Cumbers, Nativel, et al., 2008; Silver, 2003; Taylor & Bain, 2008). My research contributes to the literature which examines how corporate features and firms' global organisation shape workers' international collaboration by answering this question in the semiconductor sector. I show that the varied capital intensity requirements of semiconductor production meant that unions in each "end" related differently to their states and to other unions, as their sites were competition with other sites and unevenly dependent on their state's capital support.

d. Embedding labour in the state

Despite Lier (2007, p.818) suggesting that the state "due to its size, its legal powers and monopoly of force, [functions] as the main institution for the social regulation of the labour market," Castree (2007) claims that the state's role is seldom examined as a determinant of trade union agency. Whilst my research aims to address this issue, both these statements reify the multiplicity and complexity of the state, as to "view the state as an actor is to attribute to it a unity of purpose which it lacks empirically" (Hutchison, 2016, p.185). I attempt not to reify the state. Following Bieler et al. (2008) and Jauch and Bergene (2010), I understand the state as (1) a context or spatiality, (2) a field of struggle where various interests and actors collide and which is the product of these struggles and (3) an actor with its own agenda. That these three aspects are dialectically linked (Fairbrother et al., 2013) reflects the growing literature which understands the state as a "potentially malleable dimension of political economic processes" (Brenner, 2004, p.71) and thus, as a political process in motion, which can be *repoliticised*.

As discussed above, states as territories produce and encompass habits and cultures which shape workers' agency and their organisations (Anderson, 2012; Zajak et al., 2017). States also act as the home bases of companies and as such may serve as launch pads for their exports and sites for foreign direct investment and still influence a TNC's internal identity and practices (or lack of thereof) of social dialogue (Bhopal and Todd, 2000). As a field of struggle, the state upholds the rules of the game,

notably who is a worker, what it means to work and who can enter the territory to work (Coe and Jordhus-Lier, 2011). Unions have fought, often by leveraging the democratic process or their structural power in specific companies over the shape of labour laws, over labour market and welfare policies and over the state's role as an employer (Chi, 2017; Hyman, 2008). This has produced varieties of labour regimes across the world, under which states have awarded unions greater or lesser institutional power in the form of bargaining rules, institutional recognition, negotiating power, access to information and freedom of association (Hennebert, 2010; Hyman, 2008; Kelly, 2001; McKay, 2004). But, by the same token, companies have also lobbied states which, in the name of attracting development, have adopted anti-labour stances which impact workers' and unions' agency (Lillie and Lucio, 2004). For instance in the semiconductor sector across Vietnam, Indonesia, South Korea and Taiwan, states have supported anti-labour regimes at the expense of workers' rights, working conditions and, sometimes tragically, lives (Asia Monitor Center, 2013).

Showing the importance of various national regimes stresses, at another scale, the importance of understanding workers as place-based actors. Regarding internationalism specifically, authors argue that each national system of industrial regulation shapes unions' international activities, as labour internationalism is based on the interaction of national unions (Lillie and Lucio, 2004). National regulations may limit unions' right to strike or to receive foreign funds and may facilitate national mechanisms of collusion that inhibit international cooperation. Brookes (2013a, p.29) explains, "institutions of codetermination and social partnership arrangements give unions in some countries not only more power to negotiate with management but also incentives to maintain their positive relationships with employers and promote corporate interests over those of foreign workers" (see also Anner, 2003). This leads Lillie and Lucio (2004, p.164) to argue that unions' approaches and models "carry the regulatory characteristics of their respective national economic and social systems" (see also Bieler et al., 2008; Coe and Hess, 2013; Evans, 2010; Selwyn, 2009). In terms of the agent aspect of the state's role, Glassman (2011) demonstrates that states may favour specific companies and strategically develop specific sectors. My study shows how unions' ability to draw upon the state's interests, and from there, its power, remains crucial to unions' power and, if these efforts are driven by an internationalist outlook, they can also sustain an international campaign.

Throughout this literature review, I stressed both the idealist impulse of international labour solidarity, given labour's constrained agency across spatialities, and its necessity, in the face of these financialised, globalised and neoliberal times. I defined the concept of agency for trade unions, demonstrating the importance of understanding both workers' socio-spatial positionalities, but also and crucially, unions' ideologies, as contributing to and limiting their organising. Doing so, I returned to the agency/structure debate, emphasising how international solidarity was never a given and always had to be dreamed in order to become real and stressed the need to "embed" labour's ability to accomplish such dreams. Understanding labour's constrained agency, I showed, requires attending to, amongst other things, sectorial and national specificities, local labour-management relations, spatial and temporal dynamics, states' roles and workers' positionalities within a GPN. Cumbers (2015, p.148) explains why this matters, arguing that

A GPN approach allows us to see how labour agency and ultimately success and failure are linked to a broader set of structures, institutions and processes. By recognizing the dynamic set of relations that exist between local, national and multinational actors, it helps us to understand not only the constraints but also the opportunities for progressive politics.

Whilst labour geographers have shown the importance of engaging with these spatialities and temporalities, which are malleable and power-laden, both framing workers struggles and potentially being disrupted by them, few studies have combined attention to several local-labour management relationships, with an attention to how local unions negotiated their differences and potential conflicts over time across one TNC. In this spirit, my study aims to provide a detailed analysis of a company, its hosting states and the broader set of structures to contribute to the intellectual and political project of understanding unions' constrained agency, and their ability to create greater international solidarity. As I will show in the chapters that follow, the challenge of organising ST workers across their myriad spatialities and drawing on their uneven power reveals the extent to which the dream of international solidarity has multiple iterations and needs to be struggled over on an ongoing basis.

Chapter 3:

Solidarity from the ground-up

“[I]nternationalism ought to consist, not only in listening attentively to an internationalist discourse, but in contributing to it on our own account. We are not truly present in any conversation if we are only silent auditors ... Internationalism should [...] be a concourse, an exchange.” (Thompson, 1978, p.iv)

How does one contribute to the conversation around internationalism as a researcher and as an activist? How can one’s research reflect one’s political beliefs? How does one balance activist contributions with academic research? Following Olson and Sayer (2009), who encourage geographers to share their normative beliefs and how they shape their research, I begin this chapter by describing my own politics. I then review the activist research epistemologies and methodologies from which I draw inspiration to explore these questions and which motivated me to conduct research which would contribute to greater international solidarity. I then explain my methods: participant observation, interviews and archival research which were set within the framework of a multi-sited ethnography. Finally, I present the ethical questions that I encountered and reflect on the power dynamics which run through each relationship with the “publics” of my research – workers, unionists, activists in ReAct – and through the representation of my data. I hope to be reflective as encouraged by feminist geographers (G. Rose, 1997; Sultana, 2007), without the “self-indulgent focus on the self” which, as Kobayashi (2003, p.348) bemoans, can plague accounts of research and reproduce the power differentials between researcher and researched by forefronting the differences between researched and researcher.

1. Action-research

Calling for greater interaction between academia and politics, radical geographers urge academics to not only interpret the world, but to change it (Blomley, 1994, 2008; Bunge, 1969; Chouinard, 1994; Derickson & Routledge, 2015b Pain, 2003). Before examining how academics do this, I first outline why radical scholars connect their politics and scholarship and then present my own beliefs, which brought me to organise my research to support unions' efforts. Some geographers articulate their commitment to political research through the lenses of morality, spirituality or ethics (Cloke, 2002; D. M. Smith, 2000) or, perhaps more directly, politics (Bourgois, 2006; Kobayashi, 2003). Others emphasise that researchers bear similar ethical responsibilities in "the field" as in their everyday lives and, as a result, need to be relevant to the communities they study (Bourgois, 2006; Chari and Donner, 2010; Davis, 2006; Katz, 1992; Kindon et al., 2007; Kirsch, 2002; Kobayashi, 2003, 1994; Lawson, 2007; McDowell, 1999). My own commitment to action-research stems from my feminist and Marxist epistemologies, and, as Wright (2001) says simply, because I care about the world.²²

Feminist scholars stress that the very production of knowledge is political, situated and contested (Haraway, 1988) and that scholars cannot escape from politics, but need to "[fight] to understand better how we and others can challenge social oppression" (Chouinard, 1994, p.5). hooks (1994) brings attention to the importance of knowledge as a tool for power and as something which is interpreted from one's body, positionality, and emotions, and grounded in one's experiences. My research grew out of anger. I am revolted by the persistence of inequality and the continued economic, environmental, physical, social and political violence inflicted on the majority of the world. I take courage from Bourgois (2006, p. x–xi) who argues,

Denouncing injustice and oppression is not a naïve, old-fashioned anti-intellectual concern or a superannuated totalizing vision of Marxism. On the contrary, it is a vital historical task intellectually, because globalization has become synonymous with military intervention, market-driven poverty, and ecological destruction.

I focussed on the situation of workers in a TNC. I do not hold their situations and stories to be at the vanguard of the fight against injustice, but rather one place where

²² Cloke (2002, p.594) defines care as a will to "actively work towards reaching for the other, and sustain an emotional, connected and committed sense for the other." Lawson (2007, p.3) adds that an ethic of care requires an attention to creating relationships "in ways that enhance mutuality and well-being" across scales.

inequality is reproduced and contested. In the literature review, I introduced many of the necessary caveats I hold when approaching workers' organising, namely the fundamental inequalities between workers and companies and the organisations of the former and the latter, but also between workers themselves, as people who have uneven access to the power needed to unsettle how work is organised and defined. My research, at its scale, has tried to be part of the conversation, in practice and in theory, regarding how to further greater solidarity between workers in one TNC.

This research is also shaped by previous academic experiences. My earlier research with Eastern European migrants on the outskirts of Paris left me feeling that, despite my best intentions, I reproduced problematic tropes of academia: I dipped in and left, there were clear power imbalances between participants and myself, and the knowledge I produced did not aid participants in their struggles to stop the bulldozing of their settlements. Following that experience, I wanted to design a research project which contributed to a struggle and which took place through a long-term collaboration with partners that would support non-academic goals. Looking for inspiration, I reviewed the range of ways in which geographers have practiced such politics. Some have explored archives and public documents to produce insightful analyses of powerful institutions and discourses (Mitchell, 2004). Others have researched places and people which bear the brunt of the violence of inequality to “‘ferret out’ an understanding of truth that can speak to power” (Bourgois, 2006, p.ix), or acted as witnesses to people’s struggles (Routledge & Cumbers, 2009). Others have developed research in collaboration with and to support participants such as Action-Research (AR) and Participatory Action Research (PAR) (Cahill, 2007a, 2007b; Kindon et al., 2007; Klocker, 2012; Pain, 2004), whilst others produced research to support progressive policy (Dorling & Shaw, 2002) or partner institutions (Murray, 2003).²³ Within labour geography, Castree (2007, p.856) explains that the discipline has always been more than “simply *about* working people [...], but is in some sense *for* them too, in all of their diversity.” He adds,

It is, however, one thing to be ‘for’ workers epistemically: that is, to represent their actions and perspectives in print, in the seminar room or in the lecture theatre. But it is quite another to mobilize one’s professional capacities and outputs as a researcher to enter the rough-and-tumble of worker politics in activist mode. [...] Herein lies a

²³ Efforts have also turned ‘inwards’ as scholars have challenged the neoliberal ideologies that sustain universities (Castree, 2000b; Mountz et al., 2015) and developed alternative teaching practices (Gill, 2002). I recognise and appreciate the fact that these political stances do not always result in research projects but in a style of writing, teaching and caring that has inspired me through my years in geography.

difficult choice for labour geographers [...]: to be a relatively 'objective analyst' or an activist-scholar? (p.856)

A gradient of inside/outside runs through the methods of labour geographers. Some choose a more outsider perspective, analysing campaigns from produced documents and through interviews with the involved union activists (Aguilar and Ryan, 2009; Anner et al., 2006; Castree, 2000b; Greer and Hauptmeier, 2009; Kay, 2005; Sadler, 2004) whilst others choose to get involved in the situations they study (Anderson, 2012, 2015; Avendano & Fanning, 2014; Banks & Russo, 1999; Smith-Nonini, 2009). I chose an involved perspective because of my normative beliefs – Pulido (2008) recalls that activism also reflect scholars' personalities and needs - and the hope that this perspective can produce valuable findings. I embraced, more or less consciously at first, the politics of resourcefulness laid out by Derickson and Routledge (2015a, 2015b) which stem from the AR traditions. They argue that a key task of scholar-activism is

To attempt to find, generate and resource potential rather than only provide intellectual critique, to contribute to practices that are aimed at social transformation rather than merely the production of knowledge or the solving of local problems. (2015a, p.6)

Resourcing activism, they argue, values conceptual contributions “whilst emphasising that they are insistently and dialectically rooted in the struggles of everyday life” (2015a, p.2). I was inspired by the fact that Derickson and Routledge outline practical ways for researchers to contribute to radical practices, notably by providing time, facilitation, or money, and by creating knowledge that informs struggles. Derickson and Routledge (2015a) further recognise the dilemmas that might arise between scholars and the organisations and individuals they attempt to support: in their work, they both helped British activist groups to access resources, facilitated internal processes, and voiced concerns over the gender issues they noticed. My approach followed their framework: I tried to provide critical and supportive engagement to ReAct and the trade unions involved, whilst conducting a research which would contribute to theoretical debates.

I approached ReAct in February 2015, having heard about their work through volunteering and because they were key players in introducing organising tactics in France. I was inspired by their commitment to organise workers against TNCs. I started attending meetings, translating documents and observing their activities. In summer 2015, we discussed the possibility of me doing an action-research project with them, based on their need for greater understanding of the difficulties of building international solidarity, and my interest in the subject and in doing a

collaborative research project. As we discussed how I, as a researcher, could work alongside them, we intuitively followed the triangulation process outlined by Derickson and Routledge (2015b). They suggest a researcher interested in a resourcing approach should consider: (1) current theoretical debates; (2) which publics and projects are served by the knowledge produced; and (3) what non-academic collaborators want to know. My literature review sketched answers to (1). In respect to (2), ReAct wanted to support international collaboration amongst grassroots union leaders and to analyse the limits encountered by these efforts. Finding out the answer to (3) required my persistent sorting through the layers of divergent interests between ReAct participants, as my notes reflected:

Our discussion goes in every direction: Some want it to help develop the identity of ReAct and theorise its relation to social movements, to organise greater reflexive internal practices, to create a corporate research team, to organise surveys.... I have a hard time sharing what I am interested in. My questions feel too abstract.

Given that I was not interested in a sociological argument around social movements and that I believed that ReAct already had impressive ways to reflect on its own practices (see similar thoughts in Broqua, 2009), and that I knew that strategic corporate research would not fit academic demands, we agreed upon me doing an ethnographic study of ReAct's attempt to support ST unions, with my active involvement in this "project." Over the following three-and-a-half years, I took part in ReAct's activities, facilitated meetings between ST union leaders and helped to organise actions against the financialisation of their company. Throughout this time, I analysed ST unions' agenda in creating greater international solidarity. My input as a researcher aimed to help ReAct reflect on its international efforts, whilst my input of time, attention and funding supported ReAct in achieving its goals.

Whilst we discussed the design of the research and I shared my reflections with ReAct members and unionists, neither participated in the data production and analysis. Although I am inspired by PAR's ethical desire for research to support positive change (Cahill, 2007a; 2007b; Klocker, 2012), this research was not a collaborative process of knowledge creation.²⁴ As in PAR projects, I tried to support people's awareness of their own skills and adopt a facilitation role rather than a

²⁴ PAR researchers aim to involve and collaborate with research participants in the design, performance, analyses or dissemination of research results (Davis, 2006; Kindon et al., 2007; Pain, 2004). In doing so, they challenge assumptions about who is deemed legitimate to produce knowledge and who owns, distributes and profits from research and hope to bring about positive and contextualised change for involved communities (Blake, 2007; Cahill, 2007b; Glassman et al., 2012; Pain, 2003; Pratt & Yeoh, 2003).

prescribing one (Stoecker, 1999). I also acted simultaneously as a researcher and a member of ReAct (Blake, 2007). However, I chose to do AR rather than PAR²⁵ notably because of ReAct members' and unionists' time-pressures and their need to achieve their goals, rather than academic ones. Stoecker (1999, p.845) cautiously reminds academics that an AR project is a "community organizing and/or development project of which the research is only one piece," and, as such, the researcher should be open to other agendas. I felt a split between my academic questions and the pragmatic ones which drove union leaders and ReAct members (see Calhoun, 2008). Whilst in practice I collected both types of knowledge, this PhD mainly accounts for the academic one, which I discussed less with ReAct and union leaders. Nor did we discuss the role of space or ideology in their struggle – although these questions animate my research. They met one another, exchanged and collected *information* on security, health conditions, wages, benefits and collective bargaining agreements. They appreciated my support in enabling these conversations, yet, they did not express the desire to participate in the research analysis. This reflects Mehan's (2008, p.86) claims that

Researchers and practitioners come from different backgrounds, and in some respect, privilege different things. Practitioners want to learn about the strategies that will make the most improvement to their local situation. Researchers are more interested in abstracting generalizations from local circumstances. (see also Pulido, 2008)

Aware of these different attitudes towards knowledge production, I suggest that my action-research took on the form of a reciprocal exchange of non-equivalent resources. Union leaders provided me with access to workers and meetings; I provided them with time and an understanding of each structure, which enabled me to facilitate their coalition. ReAct provided me with access to a project and contacts, whilst I supported ReAct through translation, reflection and everyday work.

²⁵ The dichotomy I posit also depends upon which definition of PAR drives the researcher(s). For example Smith-Nonini (2009, p.116) suggests a broader definition of PAR and that researchers can become useful in more concrete ways: "accompanying organizers to protect them, producing reports or educational materials specifically designed to aid social organizing, generating media articles, doing media outreach, or testifying before a court."

2. Multi-sited ethnography

Where does one start in attempting to grasp the meanings and practices of labour internationalism? By definition, labour internationalism extends from but also beyond the local scale and includes internationalist sentiments, which are embodied in a myriad of ways. Union leaders from five countries and eight unions participated in the ST TUN through social media, email and occasional meetings, so where does one catch their network? Studies of labour internationalism mostly analyse international union bodies (Croucher & Cotton, 2012; Cumbers, 2004; Fairbrother et al., 2013; Fairbrother & Hammer, 2005; R. Lambert, 2014; R. Lambert & Webster, 2001; Waterman, 2001) or international campaigns from the perspective of a specific site, union, country or sector (Aguilar & Ryan, 2009; Anner, 2009; Banks & Russo, 1999; Castree, 2000a; Coleman & Kenneth, 1998; Herod, 2003b; Juravich & Bronfenbrenner, 1999; Sadler, 2004b; Selwyn, 2009, 2011). Few look at international campaigns by union leaders across multiple sites. Brookes (2013b) is notable for her comparative study of six international campaigns. However, the campaigns she analysed sought to solve local issues by drawing on international solidarity rather than by developing long-term international exchanges across one company. Three publications stood out for their global outlook and they informed my choice of methods: Rathzel et al.'s (2014) study of four Volvo sites; Hennebert's (2010) study of a TUN in a Canadian company; and McCallum's (2013) study of the global campaign against G4S. Each analysed a TNC across several of its sites, focussing on workers' perspectives and their unions. Rathzel et al. (2014, p.71) interviewed workers in India, Mexico, South Africa and Sweden, locating their work "at the crossroads between following an organisation (a TNC) and following a conflict (the antagonist relationship between workers and capital)." There was no transnational action involved. McCallum (2013) interviewed workers in South Africa and India and GUF representatives to analyse a phenomenon (labour transnationalism) and the context (the private security industry) of the global campaign against G4S. Building on these approaches, I conducted interviews with ST workers and unionists, observed union meetings (see **Figure 3.1**) and adopted more of an ethnographic approach to follow the evolution of the TUN.²⁶ Here, I present my data production methods and explain how I analysed the data produced.

²⁶ Rathzel et al. (2014) emphasise that their study takes the standpoint of workers, in a similar fashion as an ethnographic approach, however their encounters with participants were brief. McCallum (2013, p.203) outlines, "though I have not undertaken a strict ethnography, I make direct links with the local, regional, national and global arenas under study by specifically

| Field visits | Date | Duration | Data Production |
|---------------------|-------------|-----------------|----------------------------|
| Rousset | Jan-16 | 2 days | observation |
| Bouskoura | Jan-16 | 3 days | observation |
| Agrate-Castelletto | Apr-16 | 2 days | observation |
| Grenoble-Paris | May-July-16 | 3 months | observation |
| Agrate-Castelletto | Nov-16 | 2 days | observation |
| Bouskoura | Jan-17 | 1 week | observation, 17 interviews |
| Grenoble /Crolles | Feb-June-17 | 4 months | observation, 24 interviews |
| Tours / Le Mans | Apr-17 | 2 days | observations, 7 interviews |
| Rousset | Apr-17 | 2 days | 7 interviews |
| Muar | Jun-17 | 2 weeks | observation, 11 interviews |
| Calamba | Jul-17 | 1 weeks | observation |
| Singapore | Jul-17 | 3 days | 1 interview |
| Kirkop | Jun-18 | 1 week | observation, 3 interviews |
| Catania | Jun-18 | 1 week | 5 interviews |
| Agrate-Castelletto | Jun-18 | 4 days | observation, 5 interviews |

| International Meetings | Date | Duration | Data Production |
|-------------------------------|-------------|-----------------|------------------------|
| Geneve | Sep-16 | 2 days | observation |
| Grenoble | Sep-17 | 2 days | observation |
| Agrate | Feb-19 | 2 days | observation |

Figure 3.1: Data production instances during the research.

a. An ethnographic framework

Ethnography is an approach which attempts to “understand parts of the world as they are experienced and understood in the everyday lives of people who actually ‘live them out’” (Crang and Cook, 1995, p.4). Ethnographers combine methods such as note-taking, interviews, and document analysis with participant observation to acquire an in-depth understanding of a place, people or phenomena through time (Crang & Cook, 1995; Falzon, 2009; Jackson, 1983). Participant observation is a method whereby a researcher spends time gaining access to, observing, interacting with and reflecting upon the lives and interactions of a social group or place (Crang & Cook, 1995; Herbert, 2000). Here, I explain why I speak of an “ethnographic

targeting interviews and observation within each sphere.” This approach, I believe, falls short of the openness that characterise ethnographic practices.

approach” to describe a process during which I visited over ten sites across seven countries whilst having ties with participants across five countries and being embedded in ReAct. I reflect on how this claim sits with the archetype of ethnography, epitomised by Pritchard’s 1950 lecture where he emphasised the importance of staying for at least two years in a so-called “primitive” society to “truthfully” portray the experience of a community (in Hannertz, 2003; see also Gupta and Ferguson, 1997; Tedlock, 1991). I discuss the feminist critiques of this posture – that it pursues objectivity and reifies the place of research as a bounded “field” separate from one’s life - and outline how the rise of global ethnographies further expanded the “field” out of single sites. These two sets of critiques inform how I conceptualised my ethnographic approach.

I adopt the feminist critique that scientific objectivity does not exist and that researchers do not have a monopoly on knowledge production (Haraway, 1988). Although theory abstracts particular events and practices to establish a wider claim (Peet, 1991), as it reaches towards generality, theory remains situated, partial and contested, since knowledge is produced by people, institutions and processes which stand somewhere and hold a specific perspective and agenda (Katz, 1992; Nast, 1994; Staeheli & Lawson, 1994). I tried to be transparent about my positionality: my emotions, common sense, and experiences colour my research (Delaney, 1988; Kobayashi, 1994). Further, a feminist perspective emphasises the importance of knowledge as co-produced, as people under study often acutely analyse their circumstances and become knowledge producers in their own right (Calhoun, 2008; Casas-Cortés et al., 2008; L. T. Smith, 2012). Warren (2006, p.221) thus criticises accounts where the research “becomes an individualised process of discovery,” because they fail to acknowledge “the scholarly networks and lines of transnational solidarity that provide the basis upon which innovative findings and activism are constructed.” Although my arguments were not produced through PAR, this research is the product of collective support for which I am immensely grateful.

A feminist perspective also informs my understanding of my data. My research attempts to present insights into the worlds of my participants, however this thesis is only my “most thorough and accurate representations of [my] interpretation of research materials” (Mehan, 2008, p.84). Acknowledging that writing is an act of representation and thus a source of power, feminist scholars emphasise the need for non-innocent accounts, which are transparent concerning where their knowledge comes from and how the “self” runs through the research and its writing (Katz, 1992; Pile, 1991; G. Rose, 1997; Tedlock, 1991). Though valuing such reflexivity, England

(1994, p.86) emphasises that whilst it “*can* make us more aware of asymmetrical or exploitative relationships [...] it cannot remove them. We do not conduct fieldwork on the unmediated world of the researched, but on the world *between* ourselves and the researched.” England’s insight reflects the postcolonial and feminist challenge to the belief that the research “field” exists “out there” (Gupta & Ferguson, 1997; L. T. Smith, 2012). These scholars instead suggest that researchers are never complete insiders or outsiders but rather stand “in-between” as they co-construct the “field” with the researched (England, 1994; Katz, 1994; Kobayashi, 1994; Nast, 1994; Staeheli and Lawson, 1994; Till, 2001). I refuse to be sheltered by the notion that there is a “field” out there, from which I can retreat without consequences and which lies undisturbed, to be discovered, and mined. My “field” was not only a place, or a “people” (Hyndman, 2001), it was “a set of relations nurtured, contested and developed during the course of long fieldwork phases often lasting several months” (Caretta and Cheptum, 2017, p.415). Some of these relationships continue, even as my research process has ended.

The concept of global ethnography covers two strands of research (Burawoy, 2001; Burawoy et al., 2000; Marcus, 1995; Tsing, 2004), with my research stemming more from the second one. First, “global ethnography” examines how global processes play out in everyday lives and considers the ways in which relationships, languages, cultures and places resist and/or accommodate such influences (Crag and Cook, 1995). Burawoy (2001, p.148) adopted this perspective, recognising a key geographical insight that the global is “an artefact manufactured and received in the local.” In doing so, this global ethnography path follows the tradition of critical ethnography, which aims to examine how people “reproduce and challenge macrological structures in the everyday of place-bound action” (Herbert, 2000, p.550; see Bourgois, 2006; Katz, 1992; Morley, 1991). However, Burawoy et al.’s (2000) approach is grounded in single sites which authors compare and contrast, and thus reflects more an epistemological shift in the understanding of place (see Massey, 1991) rather than a methodological theorising of an ethnography taking place over several sites.

The second global ethnography perspective expands ethnography out from a single site and attempts to study a subject “in the multiple sites that it emerges in” (Davies, 2009, p.21). It seeks to follow people, connections, associations and relationships across space (Falzon, 2009; Marcus, 1995). Researchers have used multi-sited

ethnographies to research translocal communities;²⁷ commodity chains;²⁸ and metaphors and transnational discourse.²⁹ Davies (2009) argues that such multi-sited ethnographies can account for the practices and politics of spatially extensive movements. Multi-sited ethnographers acknowledge limits: compared with researchers involved in single-site studies, they cannot claim a “grasp of the entire ‘fields’ which [their] chosen research topics may have seemed to suggest” (Hannertz, 2003, p.207) and where the boundary of a site ends is a tricky question (J. Cook et al., 2009).³⁰ Relationships formed through multi-sited research might be less informative given their shorter duration; the selection of sites can be the result of opportunities as much as design; and language remains a key limit (Hannertz, 2003; Hendry, 2003; Marcus, 1995). Whilst my research encountered language barriers and the lack of long-term observation of local contexts, as Falzon (2009, p.9) claims, multi-sited-ness provided me with an insight into the complexity of participants’ stances, which I show to be crucial to their ability to work at the international level.

The use of multi-sited ethnographic methods was a practical tactic to answer my research questions: I aimed to follow the process of creating greater international solidarity through a network which has no physical space itself and understand each union’s embeddedness. Each site provided points of comparison between workers and allowed me to contextualise what happened in other sites. My research was ethnographic because of my long-term engagement with ReAct and union leaders and because of the importance of observation to my analysis. However, I did not observe unionists’ everyday organising activities or the quotidian pressures of work. This begs the question of why I did not embed myself in one site or union. The answer is both pragmatic and political. First, “hanging out” and doing “thick description” was very hard in practice given my lack of access to worksites, inability to speak Italian, Maltese, Malay or Moroccan Arabic, and lack of the necessary technical training. Second, being embedded in one site would not have answered what I wanted to know, since I was interested in the development of the TUN, which has no specific place. In my notes in October 2016, I reflected on this:

Although I am totally aware of the importance of ‘being’ somewhere for a long time and I appreciate the weight of space, I feel this also reifies physical space over the fact that I’m already embedded in a

²⁷ See Hannertz’s (2003) study of global news correspondents; Kelly and Lusia’s (2006) study of the experiences of migrants across borders and Davies’s (2009) study of the Tibetan liberation movement.

²⁸ See Cook (2006, 2004); Lepawsky and Mather (2011).

²⁹ See Featherstone (2005b, 2003); Hendry (2003).

³⁰ This is a critique one could also level at place-based ethnographies.

transnational ‘aspatial’ exchange [...] I want to suggest an ethnography of a process rather than of a place...

Third, my in-depth and situated perspective is grounded in ReAct rather than in any specific union. This provides another answer to why I choose not to work in a site or with a union. ReAct was introduced to the unions by a senior official from the CGT, yet it did not have an allegiance to any union, which provided ReAct with a (somewhat) “neutral” status. Introduced to the union leaders as a researcher and a member of ReAct, I was granted a double neutrality. Choosing to embed myself in one union would have positioned me, in the eyes of other unionists, with specific politics and thereby reduced the possibility of me being trusted as a guarantor of the international process. As I show in this thesis, relationships between some unionists were tense. For instance, I remember interviewing one unionist, whom others despised. Although I had informed other unionists of my plans, I wrote

I hope that no one sees us together, because I’m always afraid of the competition between unions and suspicion by other unionists and [yet] each instance of *not* being transparent can create damage to my relationships with other unionists. (notes, May 2017)

This reflection illustrates how my interaction with each union activist was assessed by the others. Wallerstein (2005, p. 49) warns researchers that, “we may imagine we are walking into a community representing only our research projects and ourselves; yet we may be viewed through the lenses of multiple experiences which we know little about or do not expect.” I believe that choosing not to embed myself in a specific union preserved my relationships with members from other unions. Last, the very shallowness of being in multiple sites allowed me to come to embody the space of international relations. I became a translator between unions, not just of languages but also of values, concerns and practices. During interviews, I was asked how things were elsewhere in ST, both regarding mundane things such as whether other workers could run on their work breaks (notes, July 2017) or more serious ones, such as how did unions deal with ST’s discrimination against militant unionists (notes, June 2018). My neutrality and work of translation informed my theoretical insights on the frictions that occur as unionists from different backgrounds come together. Multi-sited participant observation, in this instance, helped to produce knowledge and to overcome some of the barriers to international solidarity.

b. Participant observation

I became a member of ReAct in June 2015 and attended, either physically or through Skype, ReAct occasional weekends, called the Commune, where members of ReAct discuss and outline the organisation's strategy; monthly meetings to discuss one of the organisation's pressing issues; and, for two years, weekly staff meetings where project coordinators report on and collaboratively analyse ongoing issues. Concurrently, for three-and-a-half years, I observed the exchanges of unionists from the eight unions that participated in the TUN. I communicated through WhatsApp, Imo, phone calls and emails with these union leaders. I visited several ST sites, where I observed activities, held interviews and facilitated meetings and I participated in international gatherings in Geneva (2016), Grenoble (2017) and Milan (2019). Observation, as suggested by Siméant (2012), yielded crucial insights, as these events displayed some of the core issues at stake in an international network. I spent time with two families in Malaysia, two in Italy, one in Malta and three individuals in France, outside of the interviews and meetings. I took notes during and after these visits. My fears, doubts and concerns appear in my notes, along with my to-do lists and my reflections on negotiating the challenges of being an activist-scholar (see Diphoorn, 2012). Some conversations were recorded almost verbatim; others are subject to the limitations of my memory (see Cook and Crang, 1995). Site visits gave me a greater understanding of the context of each site and allowed me to position the discourses of union leaders. My visit to Singapore provided me with an understanding of why the Singapore union was not part of the TUN, whilst my visit to the Philippines supplied the TUN with information they found difficult to access, since ST workers in Calamba had no union. The longer-term relationships with key union leaders provided greater insight into the formation of the TUN.

c. Interviews

As part of these visits, I conducted 80 semi-structured interviews with union leaders, union members, rank-and-file workers, consultants, HR managers and political representatives (see **Figure 3.2** and Appendix 1 for descriptions of the interviewees). Interviews provided me with greater insights into unionists' and workers' experiences and offered interviewees a place to reflect upon differences and animosity between unions, which were often brushed over in collective settings.

| Interviews | | | | |
|------------|-------------------------------|----|--|-----------------|
| Place | Status | No | Professional characteristics | Gender |
| Morocco | UMT member | 10 | 7 operators, 3 technicians, 4 supervisors, 2 engineers, 1 manager, | 3 women, 14 men |
| | UMT representative | 5 | | |
| | Worker | 2 | | |
| Malta | GWU representative | 3 | 1 technician, 2 union officials | 3 men |
| Singapore | EIEUSR representative | 1 | 1 union official | 1 man |
| France | CGT member/representative | 18 | 6 operators, 3 technicians, 9 engineers | 4 women 14 men |
| | CFDT member/representative | 10 | 3 technicians, 6 engineers, 1 union official | 1 woman 9 men |
| | CFE-CFC member/representative | 4 | 1 technician, 3 engineers | 1 woman 3 men |
| | UNSA member/representative | 1 | 1 engineer | 1 man |
| | Public officials / experts | 5 | 2 experts, 3 public officials | 1 woman 4 men |
| Italy | CGIL member/representative | 7 | 3 operators, 4 engineers | 2 women 5 men |
| | CISL member/representative | 3 | 2 operators, 1 engineer | 1 woman 2 men |
| Malaysia | EIEUSR representatives | 5 | 1 organiser, 8 operators, 1 supervisor, 1 manager | 6 women 5 men |
| | Members | 5 | | |
| | Worker | 1 | | |

Figure 3.2: Interviewees' location, professional status, union affiliation and gender of interviewees

Mischi (2012, p. 123) observed that “interviews [provide] an occasion to review what happened during a meeting and to explain positions which are not explicitly discussed in the tight-knit activist community.” Similarly, I found it informative to organise interviews in parallel with participant observation because I noticed that my observations and notes gave me a picture which leaders had less control over, and sometimes contrasted with what they said in meetings or interview spaces (notes, July 2018). For instance,

in interviews, Samuel presents himself as in conflict with the union federal structure for his left-leaning stance, but at the same time I know that in his site, he has driven out many of the representatives [who held a working class narrative]. (notes, September 2017)

This dichotomy was revealing not just of the need to have different methods, but also helped me understand the relationships between union leaders, which, notably in France, were loaded with mistrust and past conflicts.

In interviews, I attempted to develop a safe atmosphere where people could voice their reflections (see Pile, 1991). Interviewees were provided with a consent form, which outlined my research questions. I offered them the option of being anonymous, asked for recording permission and stated that they could withdraw from the study (see Appendix 2). When possible, I followed a semi-structured format that used specific questions from which I let interviews flow (see Appendix 3). Each interview allowed me to refine my questions and to develop my vocabulary, whether about the semiconductor industry or the world of each union (see Mikecz, 2012). I found that each place where I interviewed workers presented, as noted by Elwood and Martin (2000), an opportunity to reflect on the meaning of their variation from one another.

In Morocco, I had close contact with union leaders prior to my arrival but when I got there, they told me the HR manager had told them, off the record, that I would not be allowed on the worksite (notes, January 2017). This informal refusal brought them to face a dilemma: either confront the HR manager with whom they wanted to maintain good relations or admit to me a certain collusion of interest with management in their need not to upset them (notes, January 2017). As a compromise, I was put in a room off site where UMT leaders introduced me to willing rank-and-file workers, union members and union leaders throughout the day. I interviewed 17 people over two-and-a-half days with most interviews lasting between 20 and 45 minutes, and then begged the unionist not to bring anyone else. I found it difficult to focus during the entire day and reached a level of saturation. The interviews which successfully followed a semi-structured format were mostly with technicians or white-collar workers: most of the operators spoke a rudimentary French and were quite nervous. Workers spoke with me in a place adjacent to the factory, during their break and after being introduced to me by union leaders and I felt they hesitated to speak out. Whilst I could have arranged to see workers outside working hours, I decided not to, since union leaders had not given me workers' contact information and I did not want to go behind the union's back. I also arranged phone interviews when back in France with union leaders.

In Malaysia, the EIEUSR organiser and president introduced me to operators, technicians and managers. I met with migrant workers, women from Indonesia and men from Nepal by hanging out in front of their hostel between shifts. Operators' daily 12-hour shifts left them little time and energy for external interactions and my interviews suffered from this. I noted, "shift work frames all possibilities for me to interact with them and means that I find it easier to access some categories of workers, notably technicians" (July 2017). I did not arrange for a translator because of my

lack of control over events and this led to a few makeshift situations. I followed the union president and organiser from meeting to meeting throughout Malaysia's southern region for three weeks. This provided me with more in-depth knowledge of the industrial relations system in Malaysia and the situation in ST. As with the operators in Morocco, I struggled to get interviewees to go off script. My notes show my concern:

It's hard to dig deeper for answers: I just feel like people are telling me: this is a production chain job, so what? [...] Interviews contrast with some of the quite detailed and free-flowing discussions with engineers in France, who speak about production, perspectives and development. (notes, July 2017)

The apparent lack of depth of interviews with operators in both Malaysia and Morocco may result from these workers being less involved in the union, since discussions with operators who were union leaders were more informative. They may result from my lack of local knowledge and/or reflect the different expectations that white-collar workers in Europe held compared to blue-collar workforces in the Global South, concerning their jobs and what an interview with a social researcher entails. I do not see these interviews as "failed." As Anthony and Danaher (2015) suggest, understanding the differences between operators and engineers, the obstacles to discussion, and how much knowledge about international processes trickled down from union leaders to workers was also informative.

In France, I snowballed contacts, notably through union leaders, who provided me with members' email addresses and phone numbers. In each site, I interviewed at least one representative from the CGT, CFT and CFE-CGC. However, by January 2017, I was denied entry in ST sites because ReAct was deemed an outside organisation and because the company recognised that it aimed to support union activities. Even so, workers from the CFDT and the CFE-CGC were able to invite me into the worksite, often without asking for the company's permission whereas I met CGT members exclusively outside the worksite. I reflected that this difference in treatment and denial of entry both "limits my access but also brings me closer to some union leaders [who see me now on their side]. As some union leaders are more or less able to invite me inside, I also understand the different possibilities and rights that exist among French unions" (notes, January 2017). This experience shed light on the company's uneven treatment of union members, since the company only denied my access *when it was requested by members of the CGT*. For me to be able to attend CGT worksite meetings, the CGT asked Industri'ALL to draft a letter

granting me an official mandate.³¹ To grant this endorsement, Industri'ALL demanded that each major French union in ST sign an invitation letter. When the CGC-CFE did not respond,³² Industri'All refused to grant me the mandate. This tactic potentially wielded to slow me down, reveals why unions' varied postures towards management matter. Moreover, relationships between unionists in certain sites were acrimonious, and this weighed on my interactions: I felt stressed when speaking with some union members feeling that I was breaking the trust of others (notes, March 2016). Having these varied experiences hammered home the reflections I introduce in Chapter 5 regarding the problematic consequences of union division and mistrust.

In Italy, I visited Catania, where I was not able to enter the worksite, and met members from the CGIL. This visit was not very well prepared for by the union leaders because of existing local tensions between unions and I felt I had imposed myself on them, in contrast to other visits where I had an explicit invitation. I visited Milan three times, for meetings and interviews. In Malta and Italy, I interviewed union leaders rather than workers because of the language barrier and because of my experience with rank-and-file workers in Bouskoura and Muar. In Malta, I spent a lot of time with one union leader, who introduced me to other union members.

In Singapore, I interviewed a union official from the federation; he did not provide me with contact details to reach ST union leaders. This refusal suggested a certain insularity of the union in Singapore, which was confirmed over time. Given this, my knowledge about Singapore remains little more than informed hypotheses. In the Philippines, I spent a week visiting workers' groups organised by a local union and shadowed an organiser. Between 2014 and 2016, this union had considered initiating an organising drive at the ST plant in Calamba. They decided not to in 2016. My visit in July 2017 attempted to understand why and to determine whether further support from existing ST unions would help them initiate such a drive. Workers, following logistical issues, cancelled three planned interviews and, as a result, my analysis relies on only one organiser's perceptions. A member of ReAct did three

³¹ According to French law, union members can invite union-related people to their worksite without the company being able to object.

³² The lack of an answer is of course an answer. It was a practical reminder that not all unions welcomed my presence with the same enthusiasm. For the CFE-CGC, which has adopted positions closer to management in ST, I was positioned as ReAct and seen with suspicion. Further, their unionists did not have trouble inviting me inside, and thus did not see the use of the invitation letter.

weeks of research in Shenzhen, and ReAct commissioned WE to do a survey of workers from ST. I rely on these two reports to understand ST's Shenzhen site.

Interviewees' contributions in Malaysia, Malta, Italy and Morocco were framed by my inability to speak in their mother tongue: interviews took place in English or French. My cultural proximity to and greater time in France, given my embeddedness in ReAct, means that I developed a greater understanding of what happened there. Given my dependence on unionists to pursue the TUN's goals and have access to workers, my perspective relies on those of union leaders and members rather than rank-and-file workers, and these perspectives were sometimes laced with different interests and internal mistrust. Indeed, I was sometimes warned by one leader against another: "[leader] asks me to take off a member from the collective WhatsApp chat, because, [he claims that] she reports to management what the chat is about, yet can I trust him?" (notes, May 2017). In practice, this meant that I had to be careful with how and with whom I shared information, whilst in terms of academic output, I attempt to be mindful of these internal power struggles, by describing each unions' stance to ground their comments and reactions to one another.

d. Archival research

Wherever possible, I complemented interviews and observations with secondary documentation. In Bouskoura, I found no archives and my attempts to contact town hall officials went unanswered; I met with a planning officer in Muar. In Italy and Malta, the language barrier prevented me from accessing archives. In Grenoble and Crolles, I accessed three boxes of files regarding the funding that ST received in 1992 and in 1998-2003 to develop Crolles. In Marseilles, archives were not available. I used unions' blogs to access unions' public communications and ST's website to access corporate filings. I read a thesis on the development of Crolles (Balas, 2009), a history project commissioned by Crolles' worksite committee (Moreau, 2006), and reports ordered by French worksite committees. Such documents reproduce the French bias of my thesis and illustrate the regulatory differences between countries, as French workers have greater access to information than workers elsewhere do.

e. Survey

Union leaders and I collected and exchanged detailed information on each site, pertaining to basic pay, bonuses, health benefits, working conditions, working schedules, health hazards, gender discrimination and insecure work. This exercise

proved hard, not just because of issues associated with collecting the data but also because of issues around the data itself. My notes reflected that, “the problem is that the ‘facts’ are not just out there to be easily picked. Union activists don’t have every answer on hard facts or ‘statistics’” (notes, January 2016). This was exacerbated by each site’s different rules and outlook: for instance how does one compare the fact that ST Malaysia provides workers with a cash allowance to account for their exposure to chemicals with the fact that elsewhere workers are fighting to ban chemical risk entirely? Each site was ruled by a delicate infrastructure that is hard to compare through Excel spreadsheets. Unionists were aware of this and asked detailed questions; each data point was often the result of tedious explanations (notes, September 2016). What’s more, the lack of reliable data made some claims hard to substantiate. For example, how does one know if the incidence of cancer or suicides is higher than the norm (notes, January 2016), or how does one prove Malaysian workers’ suspicion that the rate of miscarriages was linked to working in the factory (notes, July 2017)? The prevalence of gender or union discrimination was also hard to evaluate, notably because of the individualisation of workers’ wages in France and Italy and management’s refusal to share data regarding pay differences (notes, November 2016). The survey was thus helpful in both the data it generated and in demonstrating the issues workers face when sharing information across sites.

f. Analysis

I ended up with 14 notebooks of observations and reflections on meetings, emails, WhatsApp and phone conversations, 90 interviews and one survey – of which there were multiple iterations. I transcribed all the interviews and analysed them and my notes by developing categories as “code,” informed by theoretical debates. When necessary, I translated interviews. These practices both strengthened my control over the representation of data and diluted some of the colour and cultural context of each interview and observation. When analysing workers’ experiences, I found it easier to assert my claims concerning unionists’ opinions, given that I interacted with key leaders over a long period, and that they are relatively aware of their words needing to reflect a public position and not just their individual opinions. I found it harder to build claims regarding ST workers more broadly. I shared my struggle with “representative-ness” with my PhD supervisors following my visit to Morocco:

I do not know at all how to draw generality from [the interviews], it’s such a drop in the bucket. [I interviewed] 15 people, from the [2600 workers], [interviews are] quite repetitive (which at least is good because it does seem to point to a few patterns/trends). [...] I’m

struggling with the [small number of interviews] by comparison with the scale of the company. I know I shouldn't look for representativeness, but I also need to be able to justify why I will claim what I will claim. (notes, January 2017)

Rathzel et al. (2014, p.72) who interviewed a slim section of Volvo's workforce, dealt with the issue of generalisation by claiming,

[Workers] are individuals and thus their perspectives are subjective. But the language in which they speak, the images and symbols they use, are shared. In that sense, our workers are representative because they express shared meanings in a shared language [...] [they] represent the horizon of possibilities in terms of how work could be experienced by all workers.

Likewise, I apprehend the stories, through which ST informants constructed, understood and acted upon the world, as partial, honest and valid versions of their experiences (see Crang and Cook, 1995; Staeheli and Lawson, 1994). The interviews provide me an account of ST from a subsection of workers, in a situation shaped by the social relations of capitalist production and contribute towards understanding *some* of the realities of work and organising in this industry.

Whilst analysing workers' experiences, I questioned why I wanted to include workers' voices, given my recognition that there is no "abstract labourer" and my suspicion of literature that let workers speak only to claim that class was paramount to whom they were. Haider and Mohandesi (2013) reflect upon the Marxist tradition of workers' inquiry, asserting that, although these accounts recognised the importance of workers speaking for themselves, they often intended to show workers "the universality of their seemingly particular experiences" (p.4) to raise workers' consciousness and encourage revolutionary action. I reviewed above the feminist critiques to this universalist impulse, *and* I see it popping up throughout my work. I also do not feel comfortable with the posturing of unbridgeable difference between people, which certain ethnographies invoke when attempting to "[represent] at least partly *in its own terms*, the irreducibility of human experience" (Willis and Trondman, 2000, p.5). I'm stuck between feeling that this is another form of essentialism and disbelieving in the possibility of unearthing universal experiences. I know that individualising narratives are powerful corporate strategies to undermine organising efforts and that union work relies on the creation of common interests. In this text, I draw on the words offered by ST workers to further the understanding of labour agency in a multinational corporation, and, as suggested by Rathzel et al. (2014), to expose symbols, trends, and situations, which may speak to other workers and contribute to ongoing conversations regarding international solidarity.

3. Thinking through power

When supporting union leaders, participating in ReAct's activities, interviewing workers, or now, writing this thesis, ethical issues have cropped up. Askins (2007, p.351) considers "ethics as emergent through social relations in place" and thus as an exercise in communication, negotiation and reflection rather than box-ticking (see also Elwood, 2007; Ferdinand et al., 2007). Likewise, I understand ethics as a process of self-regulation, reflexivity and questioning of the research process and the power relationships it entails rather than a standard code of conduct to follow (Pile, 1991). As I wrote earlier, power is also the capacity to define the very field of engagement between people (Lukes, 2005). Examining power issues thus also entails analysing who sets the agenda. For instance, did I compromise ReAct's organising goals by bringing them a research-driven agenda? By upholding the axiom that faced with multinational corporate power, transnational mobilisation is crucial, did ReAct – and I, as a member of ReAct – impose a strategy upon the unions? Did I ignore participants' knowledge systems as I worked with them to make the coalition real? Who am I to impose an agenda on union leaders who have been organising in the company, sometimes for decades? Having already explained why I did not involve participants in the production and analysis of data, I here consider issues related to the research process itself, its definition and its implementation and issues related to my activist stance (Klocker, 2012). The power relations between myself and participants shifted as I performed different roles (see Cloke et al., 2000; Smith, 2006) and became accountable to audiences with different languages, goals, and time frames (Burawoy, 2014). I reflect on the ethical issues I encountered with each audience as an activist and researcher and the blurred in-between I came to embody.

a. ReAct

Since I proposed the research project to ReAct, my supervisors and I considered the legitimate question of whether I imposed research goals on them. There is a two-fold answer to this. First, I attempted to design the research questions in collaboration with ReAct members (see above). Second, as a member of ReAct, I had limited control over its structure: like any member, I could influence ReAct's governance and decisions but not impose them. ReAct took responsibility for what the "ST project" was and did. ReAct's attempt to bring ST trade unions together dated from June 2014: ReAct had thus defined its role, identified contacts and secured external funding prior to my involvement. Two members of ReAct had been the points of

contact for ST unionists for a year. Over the course of 2016, they took a back seat, due to a lack of time. However, monthly meetings between volunteers in ReAct and my weekly check-ins with ReAct's director ensured that ReAct had control over the "project." Importantly, for me and reflecting ReAct's goals, ReAct's direction faded as unions took control of their coalition.

In regards to the balance of power between ReAct and me, as an activist, I was under the director's management. As a researcher, Adrien and I considered how my roles as a researcher and ReAct member could conflict with/or support one another. We drafted and signed an agreement outlining the responsibilities we held towards one another and negotiated issues as they came up. On a few occasions, I felt uneasy with the director's prescriptions, in particular his decisions not to work with the Filipino union and how he pushed me to present my work to union leaders (notes: January 2016; March 2016; September 2016). I raised these issues, the director and I debated the appropriate course of action, and, ultimately, he retained the final word. In a partnership where I feared imposing my agenda, I obeyed his direction, and sometimes, I did not voice what I believe was valuable criticism. Diphoorn (2012) recounts becoming a "passive participant" in situations where she was uncertain and overwhelmed. I sometimes disagreed with the director and yet, lacking experience and authority, "froze" and followed his lead. For instance, in the early stages of the research, the director had arranged a meeting with representatives from the CGT federation. I asked him whether I should present myself as a member of ReAct or a researcher. He pushed me to present myself only as a member of ReAct in order "not to complicate matters" (notes, November 2015). He went on to prepare and facilitate the meeting without me and I observed the meeting, acting more as a researcher than as a member of ReAct. In this situation, he used his power as ReAct's director to impose his views; I reacted as a member of the organisation and obeyed. Yet, without being given the means to participate, I fell back into a researcher role. I felt uncomfortable with this arrangement, believing he had not respected my need for transparency towards union leaders (notes, November 2015). After this, I followed my own "research ethics," clearly informing all union members of my position as a researcher embedded within ReAct.

b. Core group of unionists

I developed relationships of mutual respect with 12 union leaders. In our initial meetings, I outlined my role as a researcher. I repeated this when I asked them to sign interview agreement forms, yet the relationship we developed, I believe, meant that this was not always the role they associated me with. Whilst literature points to the danger of researchers imposing their agenda on participants (Kvale, 2006), I believe that union leaders are practiced activists, and that they weighed the risks and advantages of working with me. As Martin (2007, p.324) claims, participants are “individuals with understandings, agencies and competences in their own lives [...] who can identify potential risks of research to themselves [and restrict or reject] interactions with researchers.” Stoecker (1999, p.852) adds, “if we have real respect for the communities we work with, we will understand that they will tell us when we screw up, and they will not let us lead them astray.” I believe that union leaders decided whether or not to work with me and this choice somewhat mitigated the risk of my imposing an agenda on them.

Regarding power imbalances, whilst I controlled the research process, union leaders sometimes had greater resources, access to political representatives and social capital than I (see Smith, 2006). I mention this not to abdicate responsibility over ensuring that their needs were respected, but to underline their ability to talk back and that I was not always in the position of authority (see Blake, 2007). Tedlock (1991) argues that research projects often depend upon a community accepting it as meaningful and making it possible. I felt that the core group of union leaders willingly supported my research. They helped me gain access to workers and provided me with transport, housing, meals and updates. I was welcomed and housed in Italy, Malta and Malaysia and I spent long evenings in unionists’ homes. I do not know if such generosity was granted due to my gender, foreign status, activism, or other factors. I think this reflects a more general principle that we, as researchers, develop relationships with participants whose generosity and kindness is humbling. Still our camaraderie brought another harvest of complications as I became privy to comments which I could not identify as on or off the record. Murray (2003) outlines how her multiple identities – field researcher, union organiser and friend – meant she sometimes privileged one identity over the other and, when acting as a friend, stopped taking notes. In a similar way, I have developed friendships with participants and left some of our conversations out of this work.

As the facilitator of the TUN, I had the power to frame the TUN's discussions although I attempted to involve unionists in setting agendas. I did not have the power to make decisions, which rested ultimately in the (more-or-less) democratic union structures. Union leaders held the final say over whether to work with ReAct: some decided not to for a while (notes, February 2016) and one tried to thwart ReAct's participation altogether (see Chapter 9). Over time, unions gained control over the TUN – to the point where it has now almost disappeared. This is an outcome that neither ReAct nor I interfered with.

A last consideration that I examined was that the risks of this project failing or successfully taking place were unevenly distributed. The company received my research with hostility; they denied me access to sites in France and in Morocco; no French or Swiss manager answered my requests for interviews; and, in Malaysia, I met with managers only informally. ST has considerable power over workers and, as I show, discriminates against union leaders. I feared that the union leaders helping me would encounter greater difficulty at their workplace. I am concerned that publishing my findings may result in unintended consequences for participants. As a result, I used a pseudonym for each interviewee; however, given that I provide site, profession and union affiliation for them, anonymity is relative. I considered anonymising ST, but I decided against because only one semiconductor company is Franco-Italian, save for precluding any mention of France and Italy, this was impossible. I have to trust that my participants, well-aware of ST's tactics, are better judges than I of the risks involved in participating in my research.

c. Interviewed workers

Kvale (2006) argues that interviews entail hierarchical relationships where the researcher controls the situation, imposes a one-way dialogue and holds the monopoly of interpretation. Here, I reflect on which power imbalances played out between interviewees and me, assessing how my positionality and activist posture shaped how I presented myself to participants and how I was perceived. Depending upon the country, my skin colour, relative wealth, and ease of travel positioned me as a person with more power and opportunities than interviewees. The fact that my contacts with workers came about via union leaders' introductions might have limited what my informants felt able to say. In France, some workers eyed me with suspicion, as they had previously been interviewed by a researcher and they had disliked how the researcher had correlated workers' life stories with certain postures. I had read this research prior to starting the interviews and voiced similar criticism,

which reassured them. In France and Italy, workers had higher salaries, greater technical knowledge and often greater power than me, meaning that the power imbalance was not always in my favour (see Valentine, 2002). My offer of retraction and anonymity helped establish trust, as some unionists have had experiences of their words being distorted by other unions, or the company. Some comments were deliberately made off-the-record and I do not relay them in this work.

I performed, similarly to Murray (2003) and Smith (2006), some impression management to gain the confidence of participants and emphasised different roles depending on the public. My being positioned inside ReAct meant that ST managers received me critically, which precluded me from accessing what could have been fascinating insights for my research (see Smith-Nonini, 2009). Although this position limited the data I was able to access, I felt transparent in giving an honest presentation of myself to corporate participants and unionists who were hostile to ReAct. With public officials, I emphasised my role as a researcher over my role in ReAct. With unionists, I found my position as a fellow activist provided common ground (see Diphoorn, 2012; Petray, 2012): I emphasised the tenants' union I built, or the picket lines I took part in and, I feel, my actions also spoke for themselves. My long-term commitment to the TUN often positioned me either as a comrade or as a sympathetic researcher. I attempted not to leak the criticism I became privy to about other unions, since rumours are tactically used by the company to foster divisions among unions. Instead, I tried to contextualise each union to my interviewees to support greater understanding. My activist posture thus brought many participants to have greater trust in me and presented me honestly to those who disliked ReAct's approach.

With most workers, impression management mainly consisted of creating common ground to facilitate an open discussion and a supportive situation for each to express their views (Anthony & Danaher, 2015). It was easier with some workers than others, and I wondered if I "took up the cause for the CGT and its members with whom we agree on politics, the Left etc" (notes, June 2017). With others, I found the political dissonance difficult to manage. Blix and Wettergren (2015) argue that qualitative research entails emotional labour to protect access to the so-called field and to cope with the researcher feeling resistance to some of the participants' behaviour. During some interviews, my activist self silently boiled over as participants misrepresented a situation, expressed blatant contradictions, or wilfully ignored sensitive topics. After an interview in May 2017, I wrote

My breathing is blocked. I have a weight on my chest, I can't concentrate. [...] I don't know where this pressure, which takes all my space and air, stems from... From [the interviewee's] vague responses? The sense that [they] are just producing hot air? [Their] individualistic vision of the union? My desire to scream at [them]?

I had a good relationship with the interviewee and as a result, their elusiveness felt disturbing. With a unionist I felt less close to, I was more confrontational: "several times, [they] answer deliberately off topic or without answering and I outline such inconsistencies" (notes, May 2017). During these situations, whilst probing, I did not express criticism for fear that it would jeopardise the interview (see Rathzel et al., 2014), further who am I to say what they should think? Blix and Wettergren (2016, p.695) add that emotional disconnection may happen because researchers feel "guilt is associated with the potential of delivering critique against trusting participants" and I recognise my own difficulties in this description. After one interview, I wrote

I think that, were we in the same company, [we] would be in conflict, because he really protects the interests of ST and justifies their decisions. [...] But I don't see the day-to-day interactions, the quotidian dilemmas, I don't have the pressure to be 'responsible' for jobs and I cannot say if greater militancy would bring about positive results. [...] By sharing more time with [him] and being grateful for [his] generosity, I fear I'm less critical. (notes, June 2018)

Whilst I hold reservations about several of my interviewees' opinions, I attempt to represent their views fairly and to follow Murray's (2003, p.386) reminder that, "my job is not to judge which side is 'correct' or 'morally wanting'; instead my job is to understand, contextualize and re-construct the definitions that each side holds to be true." My empirical chapters, by analysing the contexts in which unionists make their decisions, attempt to downplay such individualistic narratives in favour of understanding the pressures each interviewee faced.

Given that I interacted with managers and unionists who other unionists identified as close to management, I weighed the risks of sharing information with some participants. As I show, information about other sites' productivity rates or salaries is crucial information, which unionists are interested in accessing and not always in sharing. For instance, an HR manager drove me back to Kuala Lumpur and asked me questions during the ride. I wrote: "One makes me jerk. He asked me if I had met unions when I was in the Philippines. I lie. [...] I fear that revealing the [Filipino union]'s strategy would inhibit the very possibility to organise. [...] I skirt around the question. This isn't just curiosity, power plays and crucial information are also in the background" (notes, July 2017). I sometimes acted in a non-transparent way, because I believe that power conflicts between workers and their managers exist.

Whilst this might seem like an old story now to my readers, it was a guiding thought when making decisions: assessing power imbalances between interviewees, I believe, should also be part of a researcher's ethical considerations.

Above, I described how ReAct members, unionists, workers, and I negotiated our various power imbalances related to the research process and to the campaign, as honestly as I could and driven by an analysis of what power is. In the chapter, I described my normative beliefs, presented my "resourcing activism" approach and reflected on the different data production methods I used. This research relied on my being embedded in ReAct, participant observation in a number of union settings, interviews, archival research and long-term relationships with key participants. These methods enabled me to have an understanding of the process of creating greater international solidarity in ST and of ST workers' range of realities. I crossed worlds: from that of well-paid engineers putting on their running shoes under spectacular mountain ranges, to the hustle and bustle of taking three jeepneys – or collective taxis – in Calamba to attend a course named "Marx-Lenin-Mao" run by a militant Filipino union, where, during the break, workers shared stories of unionists' "disappearances." I'm immensely grateful for the range of landscapes, actors and stories this process has exposed me to and painfully aware of the limits to conducting this research. I picked a case study based on my relationship with ReAct, rather than for pre-existing analytical reasons. I mentioned the bias that cultural and linguistic proximity created. I tried not to reproduce the trope of the western academic going to a Global South context, yet, as a result, I give greater attention to France. This research occasioned environmental costs; pragmatic challenges in developing contacts and itineraries; and personal costs from being often on the move, having to sustain and build trust with a range of people and develop an understanding of such diverse contexts. I often doubted the reliability of the data produced and dreamed of more insights, yet I hope this thesis allows my readers to grasp one attempt at building greater international solidarity. I learned by doing and I made mistakes. I hope that participants have learned or benefitted from this project. Some days, this hope feels like naive posturing; other days, it feels real.



September 2016: First meeting of ST trade unionists from Morocco, Malaysia, Malta, France and Italy

Chapter 4:

The ST Trade Union Network

My research focussed on the attempt to set up a network that would effectively unite the different unions in ST. The ST Trade Union Network (TUN) came about after six years of discussions, encounters, mishaps, persistence, false starts and successful coordination between ReAct, some unions in ST and one global union federation. This is not a neat story, and with hindsight certain events make me cringe: I wish we – ReAct and I - had acted differently at times, had known better, had persisted. When I got involved, this effort was already underway: whilst ReAct started speaking to French union leaders in 2014, the history of international links between ST unions begins earlier. An attempt at pan-European union coordination (the EWC) was set up in the mid-2000s, and the French and Italian unions in ST have exchanged information regarding strategy since the 1990s. This history reaffirms one of the central themes of my research: establishing common ground among unions is slow work with many challenges along the way. Here, I lay the groundwork for the empirical chapters that follow by recounting, in some detail, the story of the ST TUN, spanning 2013-2019. I argue in the following chapters that these details exemplify some of the wider issues that supported and hindered greater international collaboration.

In August 2013, Adrien met with activists from a Chinese alt-labour NGO, called Worker Empowerment (WE). This was a time of relative openness in Shenzhen and Hong Kong, where many alt-labour NGOs were springing up as workers organised for minimum social benefits, better working conditions, or to claim unpaid wages. WE members were interested in organising Chinese workers in a European TNC, supported by European unions. Following this meeting, Adrien met with the CGT metalwork's federal representative for international activities. He suggested that ST would be a "good company to run a pilot test" (ReAct document, November 2013) and initiated discussion between ReAct and CGT union leaders in ST. By the end of 2013, they agreed on a project to support ST workers in China and to foster greater collaboration between the multiple ST unions. At the same time, ReAct contacted the union in ST's site of Bouskoura (Morocco), whose leaders were keen to initiate a transnational alliance in ST.

At that point, WE emailed ReAct that their preliminary study of ST showed that, despite the layoffs in Longgang (China), the company followed standard practices and that workers "seemed happy with the arrangement [provided]" (ReAct document, June 2014). They outlined the difficulties they faced getting access to workers because of ST's control over workers' dormitories, and the apparent lack of strongly felt issues within the workforce. The email concluded by stating that WE no longer wished to organise ST. Summer holidays slowed the pace of meetings between the CGT and ReAct. By contrast, UMT union leaders in Bouskoura by then had enthusiastically elaborated a plan of action to build greater international links, though the lack of response from France somewhat discouraged their efforts. To re-initiate proceedings, in October, they sent a letter to the CGT. A week later, one UMT member called a CGT representative. The phone connection was poor; the French participant observed, "apart from saying hello and exchanging information, we need to think about what we can bring to each other. We need to build [something]"; they did not plan next steps (ReAct document, October 2014). Around this time, ST initiated a restructuring plan, offering voluntary redundancies worldwide, and in Crolles, short-time working, whereby workers receive 75% of their salary without work and keep their contracts. A year thus went by without many practical steps taken to support greater collaboration among ST unions.

In January 2015, WE reiterated its interest in organising ST workers, this time in Shenzhen. By then, ReAct had contacted the Malaysian union in ST, EIEUSR, which showed interest in greater transnational coordination, and one Filipino union, PMA, which showed interest in ReAct's offer of assistance regarding organising ST

workers in Calamba. In France, Crolles CGT members' time was consumed with addressing the restructuring plans. In March, independent of union plans, workers from the weekend shift in Crolles spontaneously walked out. The CGT quickly supported them. Through links established by ReAct, EIEUSR published a statement in support; after promising to do the same, the UMT failed to do so. Pickets continued. The CGT Rousset team disagreed about the strike and CGT activists had no time for the international alliance, highlighting discrepancies between branches even within the same national union. After two weeks of mobilisation, the company and the CFDT, another large French union, agreed on a settlement, giving a one-time bonus of €300 to operators, but not engineers. Grassroots leaders felt betrayed. Otto (CGT) explained,

Workers had been on strike [...] for a month, and the [CFDT leaders] came in on the last days, sticking their flags on the roundabout. People told them, 'What are you doing with your flags? If you want to come, come but stay discreet, because we have been here for a month night and day [and you haven't].' So yeah, workers called them out [...] because [the CFDT] came [...] because TV crews were coming. [...] I'll tell you frankly, in Crolles, there is no inter-union work, and it'll take time for it to emerge.

In May 2015, ST's CEO hinted at another restructuring plan, a message which, workers felt, was aimed at pleasing financial markets. In the meantime, the UMT suggested a campaign to protect freedom of association rights throughout ST but *conditioned* the campaign on the participation of *at least* two French unions, a condition that collided with the tensions between the CGT and CFDT.

This is the point at which I enter the story. In June 2015, I joined ReAct. We elaborated an action-research project aimed at investigating working conditions and social issues within ST, a plan which we shared with involved unions and with the CFDT, which had previously been kept out of the loop because of its conflict with the CGT. After the Filipino union ReAct was in touch with backed out, another Filipino union contacted ReAct in October 2015.³³ They appeared to be interested in organising ST workers and in the offer of international support.³⁴ On the 15th of

³³ This, ReAct came to understand was because Filipino unions fight over how turf is distributed. Whilst PMA had a claim to the Calamba factory, they and the other union agreed locally over whose turf it would become, leading PMA to step down.

³⁴ This second union was interested in Calamba because they had organised workers in a nearby factory at Cabuyao owned by the Dutch semiconductor company NXP since the 1980s. NXP and ST entered into a joint venture in 2008, which was dissolved in 2010. This brought NXP to transfer its Calamba factory to ST. ST managers made sure to provide appropriate working conditions in Calamba and that all the unionists were concentrated in Cabuyao to nip in the bud any attempt at organising (notes, July 2017). Additionally, workers were

October, the CGT organised a rally in Grenoble against the restructuring plan attended by over two hundred and fifty people including some Italian unionists whilst in Rousset and Tours no walkouts occurred.

By December 2015, ReAct's proposal of an international research project hit a wall: in Malaysia, EIEUSR reported that there were no problems to research; in Morocco, progress depended on the response of a federal representative who failed to reply until February 2016; in the Philippines, the union asked for monetary support to circulate a questionnaire that ReAct had written. ReAct's director refused, claiming he did not want to reproduce the traditional North/South developmental relationship in which Northern NGOs "help" Southern social movements and dictate their agendas. I disagreed but did not feel able to push against his view. By contrast, in the same period, ReAct funded WE to write a report on the working conditions of ST workers in Shenzhen which was distributed amongst the French and Italian unions.

In lieu of supporting ReAct's survey, French and Italian federal union officials pushed unions to contact Industri'ALL, the GUF to which union federations pay dues and hold responsible for initiating international processes. In December, the CGT and CGIL drafted a letter to Industri'ALL asking for support for the project. The CGIL asked the other Italian unions (CISL and UILM) to jointly sign the letter. ReAct contacted the CFDT, which agreed to sign. On the 26th of January, ST's CEO confirmed unionists' fears by announcing the closure of the digital division and the layoff of 1,600 workers, mainly in France, the U.S. and India. This both energised international exchanges between unions and further stalled ReAct's survey. Between February and March, French trade unions organised meetings throughout the company and increased the pressure on local MPs to lobby government to force ST to change its strategy. I attempted to find contacts with Indian workers to learn about their fate, finally coming across a French worker in close contact with Indian teams. He told me that most workers, because they needed positive references from ST, chose not to protest. Concurrently, most French unions (but not the CFDT) mobilised against the French government's labour reform, which absorbed the branches' energy and attention.

reminded of the danger of being a unionist by the harsh reprisals against the NXP Cabuyao union in 2014 (see Brookes, 2017) (notes, July 2017).

By March 2016, seven unions agreed on a letter to Industri'ALL, which stated:

STMicroelectronics is a company with approximately 45,000 workers [...]. Its semiconductor activity is the industrial base of the contemporary world and experiences fast growth. However, our company follows the opposite path with a workforce and a gross income which have declined over the last years. This is mainly due to the purely financial strategy chosen by the managers, characterised by the distribution of large dividends regardless of the financial situation of the company, the decline in investment, the lack of long term strategic vision. [...]

This negative strategy was confirmed by [...] the closure of the advanced digital branch [which entails] redundancies, restructuring and voluntary departure plans. Whilst the measures touch particularly France, India and the United States [...] the negative consequences of the financial strategy of the company affect all the countries in which ST is implanted [having an impact on] wages and social returns as well as the deterioration of industrial relations, [and workers'] freedom of association. Today, there are organised unions [...] in several countries. There are also workers who want to create unions but who encounter repression by the company.³⁵

We thus call upon Industri'ALL to examine the possibility to organise a first international meeting with the different representative unions of the company. This meeting could aim to:

- Analyse the strategy of the company and its consequences in the different countries, notably around employment
- Survey of the major issues addressed by the unions of the different countries
- Address the question of freedom of association and the means to progress towards a common organisation of workers

For six months thereafter, I organised conference calls between four to ten different unionists across three to five sites and visited union branches in Rousset, Grenoble and Agrate, first to support the mobilisation to change ST's strategic plans, and second to prepare a first international meeting in September 2016. In response to the French unions' campaign against the restructuring plans, unions in Morocco, Italy and Malaysia organised diverse actions, including rallies and solidarity photos, under the slogan "all together for a change of strategy." By May 2017, ST announced a 40% reduction in dividends and prepared plans to replace the CEO. Thanks to ReAct's contacts, European unions learned of Chinese engineers' demand for better layoff benefits, which prompted the EWC to send a letter asking ST's global HR head to answer these demands. The request was dismissed in a curt statement: the HR head

³⁵ The first draft ended with: "There are also, *for example in the Philippines*, workers who want to create unions." After discussion with the Filipino union, participating unions agreed not to mention the Philippines because the local union feared that if ST knew they were trying to organise Filipino workers, they would either increase surveillance and repression or establish their own in-house union.

cited the EWC's Europe-only jurisdiction and said that, whilst European unions are entitled to their opinions on all matters, this issue was already "covered." In June, the CGT learned through its members' contact with Singaporean technicians of the death of a worker in Singapore following exposure to a chemical at work. The Singaporean union, UWEI, stayed silent on this incident, asking for no support from other unions.

In the summer, union leaders enthusiastically organised for their first gathering, sorting through an agenda, getting visas, funding, facilitating and translation. In September, leaders from seven unions gathered in Geneva, buoyed by the success of recent actions taken together, eager to learn from each other's stories and experiences, excited to build something new. Jiro, Industri'ALL's Electronics director, set the agenda, suggesting that the unions should create a TUN, which could then campaign for a GFA. In the meeting, unions mentioned wanting to support Filipino workers, since they had heard from me that there was no union in Calamba. Filipino contacts had indicated their need for their organising to remain covert, and, as a result, in the absence of a Filipino organisation, I sought to tame the enthusiasm of attendees whose efforts could expose and threaten the organising drive's very start. Without other more concrete proposals, and with, I felt, a push from more institutional unions, representatives agreed to pursue the GFA.

In the autumn of 2016, the unions drafted a GFA proposal and sent it to their local branches. I tried to identify specific aspects of the GFA which branches could use to make it relevant to their workforces, such as attention to gender-based pay gaps, limits on maximum weekly hours, and the matter of migrant workers' working conditions. In November, a UMT member and I gave presentations in Agrate and Castalsetto to promote direct exchanges between unionists. Two hundred and fifty workers attended in Agrate, thirty in Castalsetto. The Moroccan representative came with a list of technical questions to compare working conditions, canteen provisions and technical equipment in Agrate versus Bouskoura. In December 2016, EWC delegates invited Jiro to their meeting for him to present the demand for the GFA, in a space where, significantly, the Malaysian and Moroccan unions had no voice. ST's HR representative answered that signing the GFA was not on the cards, and wondered, when national movements were on the rise, why ST would swim against the current and favour transnational processes. In December, Industri'ALL sent a letter to ST's CEO asking him to launch a process to formalise the relationship between Industri'ALL – *not the TUN* – and ST, through a GFA.

In January 2017, ST declared that a GFA was not necessary since ST had already adopted the EICC's Code of Conduct and regularly implemented human rights audits. The communication cited the EWC and argued that it relied on "local structures [in non-European countries] to implement adequate rules," dismissing demands for an integrated global forum. Faced with this refusal, unions considered organising coordinated actions. Meanwhile, I met with CFE-CGC representatives, angry that they had not been invited to the September meeting because the CGT and CFDT regarded them as no different from management. When we met, CFE-CGC representatives expressed interest in NGOs, like ReAct, for their "expertise in corporate social responsibility" rather than for organising or campaign support (notes, January 2017). To present my PhD and rekindle French and Italian members' interest in the GFA, which leaders admitted was quite abstract for them, I visited branches from January to May 2017. However, ST denied me entry to their sites and a convoluted process to meet the workforce ensued, whilst the meeting in Rousset was cancelled following conflict between the CGT and CFDT over union elections. In the meantime, the TUN debated who could negotiate the GFA and, faced with ST's rejection, which strategy to adopt.

ReAct's director pushed for direct actions, suggesting union members could attend ST's AGM, target shareholders or go public with ST's refusal (notes, April 2017). Whilst the CGT, CGIL and UMT met the proposals enthusiastically, enactment was hampered by Industri'ALL, CFE-CGC, GWU and CISL leaders who opposed hurting the company's image, whilst the CFDT focussed on finding a scandal, unsuccessfully. The EIEUSR declared itself to be too far from corporate headquarters to take part. By April 2017, activities had stalled. At that time, another wave of strikes in France absorbed all unionists' time. In Italy, divergence between unions in the north and south stymied plans to negotiate a new collective bargaining agreement whilst French federal union structures tried to push ReAct out of the GFA process. In June, after the UMT publicised the death of a subcontracted worker who was maintaining Bouskoura's generators, outrage arose on the WhatsApp group. Although the UMT did not ask for support, other TUN members debated ST's responsibility.

The next TUN meeting, still partially funded by Industri'ALL, took place in Grenoble in September 2017. Union leaders decided against advertising it to workers in Grenoble and Crolles, sensing a lack of interest, and because most branch members were focussed on the last national strike against the labour reforms. GWU and CFDT representatives described CGT leaders from Rousset as "radicals" who

had prompted ST to set up sharp fences around the site to stop “union trucks” from barging in. UMT leaders could not get visas in time, and I set up a precarious conference call and chat to ensure their minimal participation. Jiro’s welcoming presentation described the goals of a TUN, automation’s growing impact on workers, and the sectoral challenge of labour organising given the large number of white-collar workers and the concentration of semiconductor companies in Asia and the U.S., where there is either a poor record of labour rights or limited social dialogue. At my suggestion, union leaders exchanged information in working groups on safety conditions and gender inequality. A CGIL representative described each union as a finger, and the TUN as the hand. There was a desire to fight against nationalist waves. The network decided to collect information on health and safety, social benefits and gender-related inequality to build a convincing argument for ST signing the GFA. Italian and Maltese unions denounced the inability of French unions to speak in one voice at the international level, bringing union leaders to postpone the drafting of demands until after data was collected.

The decentralised data collection failed. Jiro took over, to my frustration. I felt his focus on targets meant he failed to ask questions regarding sites’ realities. I facilitated bilateral conversations between union leaders, to bring back the focus to these realities and maintained a relationship with each union leader. By February 2019, whilst care for and interest in one another endured, the failure of the data collection exercise, the lack of a need for the GFA and absence of other goals, meant the TUN had nothing to sustain it and, by default, it faded away. We left the meeting without follow-up plans. The WhatsApp group goes on with intermittent exchanges and news, mostly posted by the CGT and UMT. And there the story ended, for now. In the chapters that follow, I analyse the grounds upon which this effort took place, seeking to unpack some of the spatial and temporal dimensions and narratives that sustained and strained its implementation, to reflect on, and hopefully contribute to, the understanding and practice of international solidarity.

Chapter 5:

Circuits of capital

The environment in which we found ourselves, condition[ed] the success of the company, of people who work and of territories in which workers worked. (Damien, former chief economist of ST)

In a succinct manner, Damien introduces one of the chief points of this chapter, namely the importance of people and territories to the functioning of a company, and to the creation of international solidarity. In this chapter, I follow Mitchell's (2011) call to assess *labour's geography*, attending to the political and economic environments which condition semiconductor production, and to the factors which explain the geographical organisation of ST's back- and front-end production sites. These factors, allied with business considerations and informed by public office holders' interests, led workers to have uneven power, or what Coe and Jordhus-Lier (2011) call "variegated agency," which framed their ability to work together.

In the first section, I describe key characteristics of semiconductor production. I demonstrate that because semiconductor production entails large amounts of fixed capital and because semiconductor technology is crucial to military and industrial sovereignty, some states have protected and supported their national semiconductor industries. By way of illustration, I outline how the French and Italian states shaped the birth of ST and continue to have controlling stakes in the company. This sets the context for the *political* leverage that *some* ST unions have access to. In the second section, I examine ST's global organisation and identify key factors that inform ST's location choices, returning notably to the power of states, and analyse how these factors shape workers' ability to organise, locally and globally. I show that workers face different experiences of work depending on their location in back- or front-end production and the level of national protections, and to the degree they are put in competition with one another for investments and orders. The accumulation of differences and competing interests framed their ability and willingness to work with one another, demonstrating why attention to the specific factors which inform a company's development are crucial to understanding the structural constraints that shape labour's agency across one company. This chapter is based on close reading of business texts (Brown & Linden, 2009; Luthje et al., 2013; Peters, 2006), industry news, ST Annual reports since 1996, archival material, and interviews.

1. The political economy of semiconductor production

Drawing on his study of high-tech ventures in the United States and the development of the “Asian Tiger” economies, Lerner (2009, p.42) claims, “Virtually every hub of cutting-edge entrepreneurial activity in the world today has its origin in proactive government intervention.” This section substantiates his claim. I highlight how semiconductor technology entails high start-up costs, both in terms of R&D and manufacturing equipment. I show that the combination of this capital intensity with the strategic importance of the semiconductor industry has prompted states to support semiconductor firms, though not all states can afford to do so. I then show that the history of ST came about as a direct result of the French and Italian states’ efforts to develop their national semiconductor industry. The description of these sectoral specificities along with ST’s specific history sets the scene for understanding ST workers’ uneven power across the company.

a. Semiconductors and the state: a love affair

“Semiconductor” is a generic term to describe any material that conducts electricity imperfectly (Brown and Linden, 2009). To create a semiconductor chip, different photolithography processes layer and/or erode metal oxides on a silicon substrate - the most widely used semiconductor material. These patterns create a series of connected electronic components (transistors) which enable the storage of information, the reading of signals, the organisation and supply of power, and calculating functions. Three innovations gave birth to the microelectronics industry: (1) the invention of the transistor in 1947, which allowed the storing of information through electronic currents; (2) the Integrated Circuit (IC) in 1958, which aligned several transistors together on a silicon chip; and (3) the microprocessor in 1971, which integrated several ICs on a single chip (Morgan & Sayer, 1988). Each breakthrough took place in the U.S. Two points are important to note. First, whilst these were idiosyncratic inventions, they took place in a scientific ecosystem, which was supported by the U.S. in the context of the Cold War (J. Lerner, 2009; Peters, 2006). By the 1960s, the U.S. Department of Defence was the prime consumer of semiconductor products (Peters, 2006). Public grants for semiconductor R&D totalled about \$900 million between 1958 and 1974 (Jowett and Rothwell, 1986,

p.12).³⁶ As I show, semiconductor technology's *political* significance, notably because of its key input to military technology, has continued to justify the industry receiving state support and attention.

Second, as indicated by the continued success of U.S.-based technology giants and their technological advantages in subsectors of the industry (Peters, 2006), the semiconductor industry features an aspect of “path dependency,” defined by Castree et al. (2013) as “a situation arising when a system or organization follows one possible path such that others become progressively more difficult to adopt.” This feature stems from the regular trajectory of innovation under capitalism and from the specific capital-intensity required to produce semiconductors, which meant that as companies developed specific technologies and became fixed in specific territories, developing alternative paths and territories became progressively more difficult and costly. Regarding the first aspect, technological innovations flow from gradual and continuous improvements of existing technologies rather than from discrete breakthroughs (Morgan and Sayer, 1988). This advantages existing companies, though this is a double-edged feature: the development of technologies in specific places both offers a competitive advantage to pioneer firms *and* may limit their opportunities for growth (Peters, 2006).³⁷ This illustrates an observation by Harvey (2006 [1982], p.123) who notes, “fixed capital, which is itself one of the chief means employed to increase the productivity of social labour, becomes, once it is installed, a barrier to further innovation.” Below I add nuance to this statement, showing that the rising importance of Intellectual Property (IP) rights increasingly thwarts latecomer strategies.

In addition to technological features, semiconductor's path dependency also results from the sector's capital intensity, which rises with each new technological development. Indeed, the semiconductor industry has progressed along a steep productivity rate, which the industry refers to as “Moore's law” (The Economist, 2015). Gordon Moore, Intel's cofounder, forecast that the number of transistors which could be manufactured on an IC would double every year – a prediction later

³⁶ In addition, IBM specifically received \$396 million between 1950 and 1958 (Jowett and Rothwell, 1986, p.12).

³⁷ For instance, between the 1950s and the 1990s, companies were able to break into the semiconductor market by adopting latecomer strategies, imitating and then improving existing technologies (Mathews and Cho, 2000; Peters, 2006). Existing companies sometimes missed technological breakthroughs. For example, American firms focussed on the NMOS technology due in part to their mostly institutional customer base. As a result, they missed the CMOS technology, which Japanese firms, more adapted to and geared towards consumer industries, promptly adopted and benefitted from in the following 15 years (Peters, 2006).

revised to every two years – whilst the price of ICs would be halved (Brown and Linden, 2009). This law has been synonymous with continuous improvement in performance and reduction in the size and unit cost of an IC (Hasenstab, 2013). These achievements result from three main developments. First, semiconductor companies have consistently improved chip designs. Innovations are increasingly combined through re-usable technological “blocks” (protected by IP rights) which engineers can assemble puzzle-like on a chip instead of re-inventing each block anew. Second, companies have continuously increased their ability to diminish the width of the layer of metal deposited to integrate more transistors and more complex functions on the IC, increase the speed of transmission and decrease the chip’s power consumption (Brown and Linden, 2009). The industry has relentlessly miniaturised the IC through technological jumps: whilst the linewidth of the first transistors was in the scale of tens of microns (10^{-6} m), the most advanced lithography machines now aim to print 7nm (10^{-9} m) circuits (Sperling, 2017). To illustrate this extraordinary feat, whilst there were 2,000 transistors on an IC in 1970, there are 20 billion transistors in the latest chips, *a 10^7 -fold increase* (Roser & Ritchie, 2018). Third, companies have increased the efficiency of the fabrication process (Brown and Linden, 2009). They have controlled manufacturing defects and increased the size of the wafer, which is the silicon disk upon which ICs are built. Competitive wafer diameters were 150-mm in the 1980-90s, 200-mm in the 1990s-2000s and since the 2000s, 300-mm wide. Each increase in wafer diameter size greatly improves the productivity of a fab, the increasingly automated large factories producing semiconductor chips. The larger the wafer, the more ICs are produced on each one.

These three sources of innovation entail economic constraints. The rising importance of IPs – which takes place in a broader context of a shift towards a rentier economy (Standing, 2016) and financialisation – means that small companies increasingly struggle to pay the royalties to access the needed designs, and that already established companies receive large streams of rent, which further their R&D dominance.³⁸ Each technological jump exacerbates the capital costs required, notably in terms of lithography equipment and R&D efforts to design and industrialise smaller linewidth. For instance, the jump from 32nm to 22nm linewidth on 300-mm wafers “causes typical fabrication costs to grow by roughly 40%, costs associated with process development by about 45% and with chip design by up to 50%” (Hasenstab, 2013, p.6). This becomes worse with smaller linewidth:

³⁸ For instance, Qualcomm, a Californian semiconductor company, reaped profits to the tune of \$8 billion in 2015 from its IPs alone (McGregor, 2018).

developing a 7nm chip design was estimated to have cost \$271 million, or nine times the cost to design a 28nm device (Lapedus, 2016). The drive to follow Moore's law and continuously increase computing power along with decreasing devices' size to remain competitive puts intense pressure on the industry. The R&D costs add to rising fixed investments required for each diameter increase: lithography machines have become astonishingly expensive - some of the latest machines are worth \$110 million *each* and fabs have hundreds of machines (Castellano, 2017). Charles, an industry expert, estimates that manufacturing plants based on 300-mm wafers cost a *minimum* of one billion dollars per fab whilst Intel's latest fab is said to have cost about \$7 billion (Bradshaw, 2017a). This represents a staggering jump from the 1970s' \$3 million price tag (Peters 2006, p.80). As a Texas Instruments executive remarked, "the cost of semiconductor manufacturing is rising at such a tremendous rate that the big challenge will lie not in the ability to make better chips, but in having enough money to do so" (in Brown and Linden, 2009, p.39). As a result, ever fewer companies can contemplate investing in new fabs (Any Silicon, 2016; Brown and Linden, 2011; Hasenstab, 2013). These three interrelated pressures mean that companies which successfully introduce smaller linewidth and wider wafer diameters acquire considerable competitive advantage, offering advanced ICs at cheaper cost, adding to existing pressures of scale.

The race towards smaller ICs along with larger wafer diameters that characterises the semiconductor industry in parallel with how these technical features entail rising economic constraints, encapsulates quite remarkably one of Marx's (1990) key claims regarding the interplay between forces of equalisation and centralisation in a capitalist system. Drawing heavily on Marx, Harvey (2006, p.133) notes that innovations fuel capitalist competition, as they provide "the prime lever for furthering the accumulation of capital through perpetual increases in the value productivity of labour power." Assuming similar labour conditions and following a process that Harvey calls "leapfrogging," companies must equal or improve techniques adopted by other companies or face irrelevance, given the "coercive laws of competition" that reign over capitalism. However, underlining the spatial consequences of such leapfrogging, Smith (2006) argues that technological innovations also act as a key levelling or equalising force in the production of uneven development, whereby over time companies attain a type of equilibrium whereby they achieve similar returns and productivity until an innovation ruptures the equilibrium. The development of the Asian Tiger Economy, notably based on semiconductor industries, is a striking example of how this can take place in practice

(Mathews & Cho, 2000). However, Marx (1990) also notes that this equalisation is always contradictory, for competitive economies also create the conditions for ever greater centralisation of capital: monopoly positions arise, whereby smaller companies are destroyed or appropriated by larger ones.

In the semiconductor sector, the process of equalisation, whereby companies can copy and further develop existing technology and thus fend off the monopoly situation, is frustrated by the interlocking links between technological development, capital requirements and patent laws which curtail the spread of innovation in favour of increasingly large semiconductor companies (Brown and Linden, 2009). The industry's development thus remarkably illustrates how technological development holds within it both equalising and centralising forces and the salience of Marx' analysis almost 150 years on. The whirling spiral created by the interplay between such equalisation and centralisation, within a competitive system, is illustrated in the ongoing pressure of business cycles (see Section 2.b below) but also in the growing financialisation of the sector which turbo-charges monopoly situations (see Chapter 7). These interlocking tendencies stress that one company's development rests on ongoing contradictions and instability. Significantly, workers are caught in these contradictions and, whilst I show in Chapter 8, that they may be able to mitigate the worst impacts of these pressures on their individual companies, the churning process of capitalism means that not all workers can, and when they do, it is only ever a temporary "fix."

In addition to pointing to the fundamental contradictions that workers face, the interlocking loop of technology, capital and path-dependency also matters because of the political nature of semiconductor technology. Indeed, technological considerations are key to a semiconductor company's success *but also* to that of entire national industrial sectors and, as a result, to states' geopolitical, military, and industrial dominance (Sayer, 1986). Semiconductor technologies are central to what has been deemed the third industrial revolution, which refers to the growing automation and digitalisation of manufacturing, and the fourth industrial revolution, which will be "characterized by [a] much more ubiquitous and mobile internet, by smaller and more powerful sensors and by artificial intelligence and machine learning" (Schwab, 2016, p.7). Connected devices, biomedical inventions, advanced military equipment, and the "Internet of Things" all depend on the capacity to produce and improve the ICs they rely on. Morgan and Sayer (1986, p.51) argue that such interdependence leads to a situation where "any country which lacks a capability in semiconductors will become technologically dependent across its

electronics industry as a whole.” Damien explained, “Chips are an infrastructure of sovereignty. Without it, there is no internet, driverless cars, connected objects, health-related applications.” He added that this dependency has an impact on companies in other sectors, leading to types of economic and geopolitical war between states over control of such innovations:

You are not going to build the smart car by buying your chips from the Americans. You can't believe such fantasies, the economic war is still here, and it has never been elsewhere. [...] I hope you don't imagine that Qualcomm [U.S.-based] will sell its best chips for intelligent cars to Peugeot before Ford? That's just pure heresy!

Indeed, the presence and control of semiconductor industries may enable profitable exports, advanced military technology and positive externalities in the form of a dynamic job market or a head start in related industries. The path dependency of semiconductor production, its capital intensity allied with the strategic significance of chips to future industrial growth and military prowess has meant that some states have systematically intervened to secure a thriving semiconductor industry and “develop their competitive advantage” (Brown and Linden, 2009, p.164). Amongst other things, states have introduced protectionist policies, imposed specific standards for the benefit of their favoured company, upheld preferential purchasing policies, offered training programs, supported laboratories and technology transfer agreements, incubated semiconductor firms (e.g., Taiwan) (Mathews and Cho, 2000), manipulated their currencies, and provided easy access to capital (e.g., Japan) or bailed out companies (e.g., South Korea bailed out Hynix in 2001 with \$64 billion, Peters, 2006, p.61) (Brown and Linden, 2009; Jowett and Rothwell, 1986). These policies continue to this day, with even higher stakes. States still perceive foreign companies as threats to their national companies and economies, as illustrated by recent American orders prohibiting mergers and acquisition activities between American and Chinese firms, citing potential leakages of IPs and “threats to semiconductor innovation and U.S. national security” (Dye, 2017; Lucas, 2017). Countries which want to create a semiconductor industry *ex nihilo* face the need for *huge* investments. China has promised \$160 billion in the next ten years to ensure its semiconductor companies' competitiveness (McGrath, 2018).

This discussion highlighted the key technological, economic and political features of semiconductor production and showed how their interrelations have prompted some states to actively support the development of their national semiconductor sector, but also encourage tendencies towards monopolisation. This knowledge is crucial to understanding the environment in which ST workers functioned and to

appreciating the significance of capital investments, the erosion of which was core to workers' fear of financialisation. Furthermore, this discussion sets the scene for understanding why workers were able to draw on state representatives' support to further their demands, since, as I show next, ST is no exception to the trend towards state intervention and support.

b. The history of STMicroelectronics

STMicroelectronics was created in 1987, combining “the non-military business of Thomson Semiconducteurs, the microelectronics business of the French state-controlled defence electronics company, Thomson-CSF, and SGS Microelettronica, the microelectronics business owned by [...] the Italian state-controlled telephone company” (ST, Annual Report, 1996, p.5). The Thompson semiconductor division resulted from the French state's 40-year strategy to develop a French semiconductor industry, based on merging different companies and start-ups (Moreau, 2006). One of its precursor companies was the Compagnie de telegraphie Sans Fil (CSF), which produced tubes starting in 1955, then diodes and germanium transistors in St Egreve, a stone's throw from Grenoble. As germanium became obsolete, the CSF lab attempted to develop transistors based on silicon (Balas, 2009). Yet, following the launch of Sputnik, the previously relatively open sharing of technologies between France and the U.S. stopped in the name of “defence secrets” (Moreau, 2006). Emile recounted that,

We needed electronics which worked with nuclear [rays]. [...] This forced [the government] to think about the components [...] but the U.S. didn't want France to develop its [atomic] bomb, so there were restrictions on technological transfer.

Narratives like these reiterate the *political* nature of semiconductors. Concurrently, engineers from the Nuclear Study Centre in Grenoble understood the revolutionary potential of semiconductors and in 1967 successfully lobbied for the creation of a publicly-owned electronics and information technology lab, the LETI. However, by 1972, the lack of state support and an industrial vision within the LETI pushed its researchers to create a private company, EFCIS, to industrialise the technologies they had developed (Balas, 2009). Following a number of tumultuous years of competition between EFCIS and CSF – which in 1968 merged with Thomson under pressure from the state in 1976, Thomson-CSF acquired shares of EFCIS and gradually increased its control over its rival (Balas, 2009; Daviet 2000). Thereafter, Thomson-CSF benefited from the state-backed Plan Composant which allocated 600 million francs between 1978 and 1982 to facilitate the emergence of a national

semiconductor industry (Balas, 2009). This plan failed because of the French market's insufficient size; the competitive advantage of American and Japanese companies; and the significantly larger public subsidies in the U.S. and in Japan – 500 and 300 million francs per *year* respectively (Balas, 2009, p.245). In 1982, Thomson was partly nationalised and then pushed into a merger with an American-French joint venture, Eurotechnique, based in Rousset. The government tried again from 1982 to 1985 to breathe profitability into the company by subsidising it to the tune of \$820 million (Peters, 2006, p.12). This partially failed. In 1986-87, Thomson fired a thousand workers in Grenoble (Reverdy, 2014, p.7).

SGS-Microelettronica shared a similar fate in Italy. Founded by Adriano Olivetti and Virgilio Floriani in Milan in 1957, it later internationalised its activities, creating a joint venture with Fairchild – an American company – and a site in Singapore in 1969 (Daviet, 2000). Following financial difficulties, it went under public ownership in 1971 and then merged with ATES, which produced tubes in Catania, Sicily. In 1979, when the Italian state shifted its strategy regarding publicly owned corporations, the company became privately managed under the direction of Pasquale Pistorio – who would later become ST's CEO – whilst supported by the national plan for microelectronics (1982-1992). Thus, both Thomson-CSF and SGS-Microelettronica were more or less inspired by, and in competition with, American companies, had state support, and pursued struggling business models within a disadvantaged Europe. Pistorio wrote that in the 1980s

The United States and Japan combined financial resources and a big internal market [...] with a large pool of qualified labour, in an industrial environment, which enabled companies a better use of human and capital resources. [...] They also had access to financial support for research, thanks to existing national plans in this sector. Lastly, they benefited from the knowledge and the industrial synergy between the customers and producers of semiconductors. In other words, they seem to have it all. (in Balas, 2009, p.244)

In 1987, there “was a French-Italian [i.e., French and Italian state] desire to merge” (Louis) the two companies which were “dwarfs, we were too small, we didn't have a critical size so we had every chance to disappear, lots of debt, no growth” (Damien). They thrived as one company: ST. In 1996, ST was introduced onto the stock market with the French and Italian states each owning a controlling minority share of 13.5% (ST, Annual Reports 1996). ST, in a remarkable turn, became successful through the mid-2000s, when it employed some 52,180 employees, and in 2007, reached \$10 billion in revenue (ST, Annual Reports 2007). According to Louis, this was notably thanks to Pistorio, who “had an industrial vision of microelectronics, [...] re-

energised the sector with the help of the state and of the regions [and] brought ST to the third global ranking.” However since then, ST has undergone several restructuring plans and closed many R&D divisions and back-end sites (ST Annual Reports, 2009; 2013; 2017), a shift I analyse in Chapter 7.

In explaining this industry’s high capital intensity and geopolitical significance, I have introduced the matrix of considerations which frame ST’s development. I stressed the reinforcing links between semiconductor technology and their spatial development, showing how the development of technology in a certain place shapes the broader dynamics of uneven development between countries and I return to the significance of this for trade unions’ power next. Harvey (2006, p.122) argues that, often “technological change appears to assume an autonomous dynamic, entirely divorced from its origin in capitalist competition and class relations,” a process akin to the fetishism of the commodity. As I have shown, the technical characteristics of chip production and their economic constraints reinforce the path-dependency feature of semiconductor industrial development and intersects with political considerations, given this technology’s geopolitical significance. By claiming an agency of technology, I am not embracing a concept of “things” as agents in and of themselves (see Arboleda, 2017; Swanton, 2013), devoid of a dialectical process whereby they shape people’s lives and are constituted by people, within specific political and economic systems. Rather, I demonstrated that chip technology’s “power” to shape the development of the industry stems from political and economic considerations, which have prompted some states to intervene to support their national industry, ST being no exception. Morgan and Sayer (1988, p.20-21) argue that, “there is no contradiction in acknowledging both that the technical properties of material [...] have an irreducible quality, and that their use and manipulation is always influenced by social characteristics.” This politicised understanding of chip technology’s “agency” aims to contribute to “more nuanced concepts for understanding the relations among people, knowledge and things” (Kirsch and Mitchell, 2004, p.695) and thus, crucially, labour.

2. ST's geographies of production

In September 2015, a union leader told ReAct's director that he

seemed to underestimate the *difference* [emphasis added] between back-end and front-end [sites]. The activities have nothing to do with each other. The comparison potentially doesn't make much sense. [Back-end] activity has been totally offshored for more than thirty years. Back-end [sites] live their lives. No one really thinks about them in terms of global corporate strategies. [Our union] would suggest [regarding international solidarity] that Morocco, Malaysia and others suggest what their claims are, and we support [them].

Three-and-a-half years later, as we walked back from the third international gathering of ST unions in February 2019, the lead officer of electronics for Industri'ALL turned towards me. Soon we were talking about the difficulties of creating the network. He noted that this sector is more complex than automobile production, which entails a standardised production process and often shared experiences across the workforce. He stated, "Everyone is totally *different* [emphasis added], they do different jobs, it isn't easy to see what they have in common. It makes it difficult to organise" (notes, February, 2019). In the following discussion, I analyse what the *difference* mentioned by interviewees entails and argue that these varied landscapes challenge inter-union collaboration by decreasing the commonality between workers and putting in place complex patterns of internal competition between sites and workforces. Coe and Jordhus-Lier (2011, p.221-222) claim a GPN analysis may reveal

The variegated landscape for agency potential across different sectors. While some workers occupy privileged positions within the broader system – associated, for example, with high levels of value-adding activity and low levels of potential substitutability – others find themselves in far more marginal, transitory and competitive working environments.

By attending to the differences mentioned by interviewees, I explore Coe and Jordhus-Lier's claim in *one* company rather than an entire GPN. I argue that *variegatedness* is about workers facing varying conditions, which shape their power and vulnerability locally but also their interest in international collaboration.

Semiconductor production is divided into three main processes which are scattered around the world: (1) R&D; (2) manufacturing; and (3) assembly and testing.³⁹ Within ST's business, the three processes cohabit: (1) and (2) make up front-end

³⁹ I ignore the marketing and sales offices because of the smaller scale and dispersion of their offices.

activities and (3) back-end sites. Here, I examine how ST workforces' varied environments shaped ST workers' power, vulnerability and inter-site relationships. Exploring these geographies, I found myself revisiting theories around industrial location and wondered what I could add to this body of research, which gradually merged into the GCC, GVC and GPN literature. I cannot encompass the variety of national industrial relations frameworks and local conditions that workers in ST's 11 major plants and three R&D centres face. To go beyond stating that "geography matters," I analyse some of the factors which determine each site's continued existence as a semiconductor site, recognising that they exist alongside elements of serendipity and mere history (Rathzel et al., 2014).⁴⁰ Here, I first describe the organisation of production in ST, displaying simply the varied contexts it encompasses, and then show how ST's business environment and corporate relationships were also crucial frames for understanding workers' ability to exert power. Last, I analyse the factors which conditioned back-end and front-end sites' survival. I argue that understanding the matrix of these factors, which represent a combination of business considerations, labour and capital costs, as well as ST's territorial embeddedness, is key for evaluating the varied material conditions of inter-union collaboration in the semiconductor sector.

a. Embedding ST in space and time

In R&D sites, engineers determine a chip's function and design the physical layout of the metal oxide for each one. Most workers are white-collar workers: engineers, managers and administrative staff. As of 2018, 16.3% of ST's workforce or approximately 7,400 people work in R&D (Ferro, 2018, p.5). This is a "skill intensive" part of the production process, which features a rising number of hours to design ever-more complex chips and provide a software package for each (Brown and Linden, 2009). As a result, and although firms' R&D costs as a proportion of sales have increased from 10% in the 1990s to 17% in 2006 (Brown and Linden, 2009, p.144), there remains a "productivity gap" whereby design engineers' capacity to design new chips cannot match the pace of technological development. This has

⁴⁰ For instance, one manager explained that ST developed in Muar in 1967 because a representative from ST on their way to Malacca from Singapore had to stop there for the night. He met a representative from the state who offered ST land and attractive energy prices. ST then located in Muar (notes, July 2017). According to Damien, "Catania [...] well it was [Pistorio's] 'pet project'. [...] because it is his country, and he is an eternal immigrant, so he dreams of Sicily," whilst Malta was chosen because "it is an ex-Italian colony and it isn't far [from Italy]." These anecdotes emphasise some aspect of chance in locating sites and illustrate Schoenberger's (2001) argument that companies' trajectories are shaped, at least in part, by their managers' interests and identity.

led companies to standardise some components of design, to outsource part of their design needs and to open R&D sites in countries with a cheap engineer labour pool, such as India (Brown and Linden, 2009). These trends are reflected in ST, which, in the 1990s, opened R&D sites in Noida and Bangalore (India) with 900 to 1,500 workers.⁴¹ However, most of ST's R&D work continues to be performed in France (approximately 2,950 workers), Italy (approximately 2,000 workers) and Singapore (approximately 1,000 workers) (see Appendix 4 for the full figures of ST's global workforce). Not only is R&D highly skilled, it tends to pay well: French engineers' wages *start* at €2,500/month and can go up to €6,500/month and Italian ones at €2,000/month up to €5,000/month. I was not able to find equivalent data for Singapore or India.

After the design of a chip comes the fabrication stage, which takes place in increasingly automated factories called fabs. Workers in fabs are mostly operators and technicians, who are supported by industrial engineers. ST employs approximately 19,300 workers in fabs in France, Italy and Singapore (including engineers, there are approximately 9,170 fabs workers in France, 8,450 in Italy, and 4,600 in Singapore). These workers are unevenly distributed, just like the R&D teams. Whilst the two largest fabs of Crolles and Agrate each encompass approximately 5,000 workers, there are only 1,500 workers in Tours (See Appendix 4). Fabs provide strictly controlled internal environments to avoid any contamination of the chip (Ezratty, 2014a). There, each silicon wafer goes through hundreds of different processes which build and erode successive layers of resins, film materials, and metal oxide over the silicon (ST Microcontroller division, 2000). Fabs are qualified according to the diameter of the wafers they produce. Entry-level wages for operators are lower than they are for engineers, approximately €1,500/month in France and €1,300/month in Italy, in line with statutory minimum wages and reliant on complex bonus structures.

The last production stage takes place in back-end sites where the chips are cut out of the wafer, placed on a frame, connected with copper wires, assembled in a protective package, and tested (ST Microcontroller division, 2000). Apart from Rennes (France, 100 workers), Toa Payoh (Singapore, 1,300) and Kirkop (Malta; 1,600), ST operates most back-end sites in the Global South: Bouskoura (Morocco; 3,450), Muar (Malaysia; 3,900), Shenzhen (China; 4,800) and Calamba (the Philippines, 1,600). In total, there are approximately 16,850 workers in back-end sites, most of whom

⁴¹ Most of Bangalore's 600 workers were fired during the restructuring that took place in 2016. I have not been able to access specific data for Bangalore since.

are operators and technicians, with fewer engineers and managers (ST, 2017).⁴² Back-end operators' entry wages in the Global South are much lower than those of fab operators, ranging from approximately €250/month in Morocco and Malaysia (excluding bonuses) to €840/month in Malta in 2017.

In short, ST's employs a highly diverse workforce in terms of expertise, pay and location that is roughly split between front-end sites (26,700 workers) and back-end sites (16,840); between Global North and Global South locations; and, in front-end sites, between operators and engineers. Of course, this distribution is not random: the spread of ST's activities relates directly to labour and capital costs, as well as to active state intervention, as I show below. Furthermore, the organisation of work is not just set in space, it is also set in time and business relationships. Morgan and Sayer (1988, p.17) thus state that workers are vulnerable because "the firms that they work for have to conduct their business in [a] turbulent and uncertain environment." By examining the cycles of the semiconductor market, the resulting vulnerability of sites within ST, and the role of business clients in shaping workers' varied experiences and uneven structural power, I argue that it is not possible to decouple internal corporate changes from global cycles and business relationships, as I show when examining, in Chapter 7, the sector's and ST's growing financialisation.

The semiconductor industry exhibits extremely volatile economic cycles (Brown and Linden, 2009; Chery, 2017). Boom years are followed by sharp dips in demand: Between 2001 and 2002, the sector dropped from a 40% revenue growth rate to a -40% rate of contraction (**Figure 5.1**). For Luthje et al. (2013, p.40), these bubbles follow from the "structural overcapacity [...] due to extremely short cycles of innovation and capital valorization" in the semiconductor industry. Each company seeks to be ahead of competitors by committing large resources to R&D and production, which can induce periodic crises of overproduction whilst clients overstock, artificially driving up demand (Brown & Linden, 2009). Tendencies towards overproduction and crisis, as engines of growth and destruction, are endemic to capitalism (Harvey, 2006). Authors argue that they are specifically potent in the semiconductor industry, given the increasing sunken capital costs associated with chip production and the volatility of market cycles (Brown and Linden, 2009; Ezratty, 2014b). A minority of firms may thrive during a low-growth period, however

⁴² An astute reader might notice that this leads to a total workforce of 7,400 R&D workers, 19,300 fab workers and 16,840 back-end workers, equalling 43,540 workers, which is short of the 45,500 figure quoted. The difference reflects the fact that I did not include the marketing and administrative workers.

Morgan and Sayer (1988, p.269) grimly stress, “not all [companies] can keep up [...] simultaneously.” This restates why business cycles matter: industrial development does not progress “in smooth and evolutionary ways but rather in cycles interrupted by plant closures, layoffs, and massive restructuring during periods of economic crisis” (Luthje et al., 2013, p.225) and any attention to workers’ power must also attend to these broader business cycles.

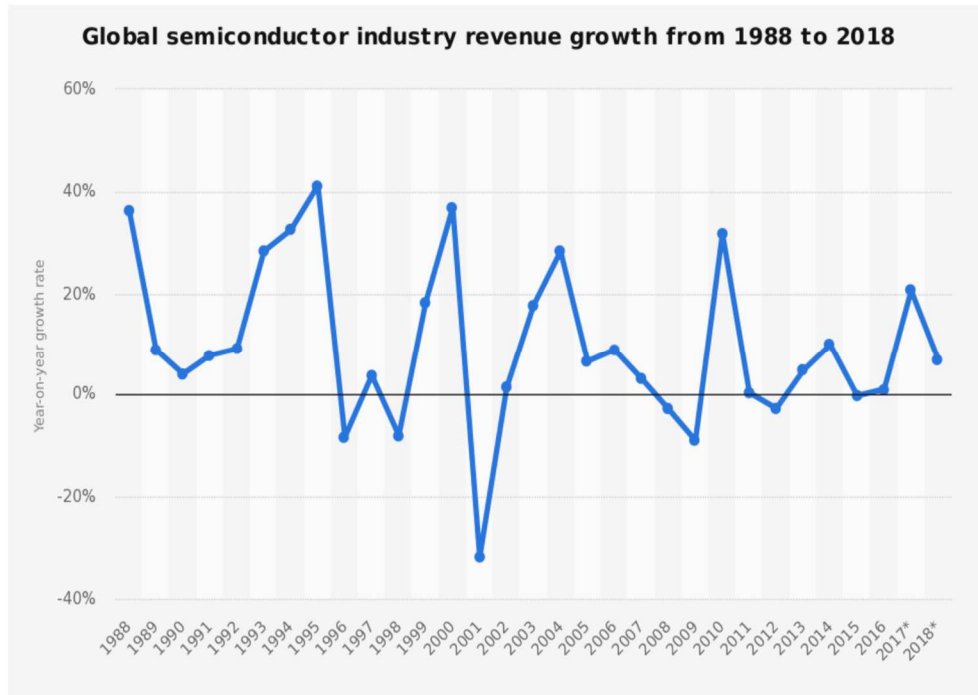


Figure 5.1: Global semiconductor revenue growth from 1988 to 2018 (Statista, 2018)

ST’s French workers clearly correlated different restructuring plans they lived through with market cycles. For instance, in 1990 in Rousset, “there were job dismissals,” said Alban, who explained, “it was a cycle of the market, [and] we were at the bottom.” Claire recalled the mobilisation in 1995 of three hundred white-collar workers in Rousset who feared a redundancy plan (notes, February 2017). Rene remembered that “in 2000, there were significant pay rises [...] and after, there was a crisis that arrived in 2001 [...] [ST] said we’re going back to ground zero for all the job grades, the things, the benefits. And workers exploded.” A mobilisation followed, which Emmanuelle remembered, “was really conflictual, following the recession [in semiconductors]. [...] [It was] the last time we burned tires around here on the roundabout, with the barbecues and the sausages.” In 2004, six hundred workers in Rennes lost their jobs; in 2016, there were four-hundred-and-fifty voluntary redundancies in France. Each of these events followed a dip in the market, illustrating how global cycles impact workers’ local conditions. Cycles did not only

have negative effects on workers' jobs: unions also used positive market cycles to push for greater pay. For example, in 2018, three French unions signed a declaration in common proclaiming "despite two exceptional years [of growth in the sector and the company], your pay rise just doesn't add up!" (CFDT, 2018). These examples demonstrate that French unions were well aware of the importance of the economic environment in terms of their *structural power* to bargain with ST. Raphael simply explained, "there is no miracle, economic activity is leverage" (notes, October 2018). This acts as a reminder that unions' power is only effective if they threaten their employers' interests (Brookes, 2013a) and that the effectiveness of this threat is mediated by dynamics beyond a single firm.

Not only did business considerations inform workers' structural power, but the organisation of the company means that workers were *unevenly* exposed to the dips of the market. Workers explained that both within and across countries, some workers could be doing well whilst others experienced difficulties. Jules from Crolles remembered, "[Once, in Rousset] they were totally overloaded with work, [whereas] we had weeks of partial unemployment." Until 2016, R&D and production efforts in ST were segmented between analogue and digital divisions, the former mostly in Italy and the latter in France. Peppe explained that "you [had] to consider that from a technological point of view, you could divide the company into two [...] [Almost like] two different companies" and this meant that "[experiences] can be uneven." This mapping of ST's operational divisions across France and Italy encouraged workers to hold nationalist readings of ST's difficulties. For instance, when no investments were planned in Italy, Lucas from the CISL read this as a consequence of the digital division's large losses, complaining that the Italians – and not the analogic segment per se – had to shoulder the burden of the "French losses" (notes, November 2016). French unionists recognised this resentment:

The Italians were scared that [...] to continue losing money [by protecting the digital division] was to make the Italian side also shoulder the losses, whilst it wasn't their fault. [...] Why should investments in Italy be threatened by the [budget] hole on the French side? (Baptiste)

Thus, workers suggested that national loyalties and fears flared up over the question of who should pay for the losses of the French digital division. This illustrates that, within the same company, workers are exposed to different market forces and that the division of work across the production chain may exacerbate anxieties about one national workforce benefitting at the expense of another. These tensions also fluctuated over time, signalling the importance of attending to workers' temporal

contexts, to understand how these may bring together or divide workers based on their business's organisation.

In addition to market cycles, workers also referred to differing exposure to ST's clients. The semiconductor industry, which was first dominated by institutional clients, has become an industry which caters to the needs, desires and whims of price-sensitive consumers (Brown and Linden, 2009). This gives enormous power to the final client (e.g., Bradshaw, 2017b and Brookes, 2017). ST's growth in the 1990s and 2000s was propelled by its strong relationship with Nokia (Balas, 2009; Brown and Linden, 2009). However, this relationship backfired. When Nokia failed to embrace the smartphone turn, ST lost a large percentage of its digital market share and implemented several layoff plans along divisional lines. As a result, Peppe explained, "In France they suffered a decline in production that was higher than [in Catania]." As noted by Brookes (2017) and Sadler (2004a), ST's exposure to clients was not only about vulnerability but also, sometimes, about workers' power. In Le Mans, workers were saved several times from layoffs because of their valuable business relationships with Samsung. Arnault explained, "We can thank the management from Samsung, because without them we would have rapidly been fired [...] Once you were attached to a guy [sic], a [Samsung] manager, he held onto you tight and we held tight onto him." Laura recounted how after the 2016 restructuring plan, "ST kept some [Indian workers] because at one point the clients heard [about the closure]. They said [to ST], 'You have committed [to this product] so you are finishing it.' So [ST] kept [Indian workers] for two months in Noida" (see also CGT, 2016b). This wasn't just about protection, but also, in the spirit of Wright's notion of structural power, about leverage. For instance, in spring 2018, workers in Crolles leveraged the fact that the fab was fully loaded for a powerful client to threaten a partial strike, securing an additional bonus (notes April, 2018).⁴³

As the preceding discussion suggests, business considerations are central to the study of GPNs and of workers' agency (Coe and Yeung, 2015). ST is clearly vulnerable to market cycles, whilst workers were unevenly to use their structural power, depending on their sites' relationships with clients and the load of each fab. In addition to workers' geographical fragmentation, it is also clear that workers' ability to

⁴³ Unionists were not always ready to leverage such power. Some workers feared that militant action would scare clients away and a few mentioned during my visit being scared to "saw off the very branch where they are sitting, by creating bad publicity for the company" (notes, April 2017). Olivier explained that "[the client in Crolles] can't be used as leverage, we can't lose our biggest client" (notes, April 2017). Union representatives thus held different attitudes to what constituted appropriate tactics and I return to this divergence in Chapter 5.

recognise common interests with other workers, whether between two countries – *pace* the digital/analogue division – or in the same country – *pace* the diverging experiences of Crolles versus Rousset – was framed by their being placed unevenly in relationship to market cycles, clients and product loads. This simple point bears repeating, because these temporal and geographical positions lead workers to having *varied* experiences, senses of power, vulnerability and interests, which all add to the complexity of building the common interests crucial to sustaining international collaboration.

b. Locating back-end sites

These temporal and spatial dimensions were further framed by specific considerations, which informed the profitability and viability of back- and front-end production and, as a result, the internal competition between sites in ST: labour costs and rights, state support, technological secrets and capital costs. As I show, these factors differed between front and back-end production and conditioned the potential cooperation between unions across each “end.”

Assembly and testing equipment costs are not nearly as high as those required to set up a fab. Raphael explained “the stakes for back-end investment are totally different, it costs nothing. The global organisation of back-ends spends its time playing with adding or subtracting pennies.” In 2016, packaging and assembly equipment spending for the semiconductor industry was \$1.83 billion (Statista, 2017, p.50). By contrast, spending on equipment for wafer production was \$37 billion (Statista, 2017, p.49) and expenditure for R&D \$36 billion (Statista, 2017, p.35) or forty times greater. As a result, labour costs are a significant variable in back-end production costs. Historically, this has led to the transfer of back-end production to countries with cheaper labour – ST’s annual report (2009, p.26) notes that “more labor-intensive back-end facilities are located in Malaysia, China, Philippines, Singapore, Morocco and Malta, enabling us to take advantage of more favourable production cost structures, particularly lower labor costs.”

Taking advantage of “lower labour costs” meant employing a majority female workforce (see Chapter 5); situating in locations with fewer labour rights (e.g., Malaysia and China); and fighting workers’ attempts to create unions. In Morocco, ST fired unionists twice prior to 2010, when workers’ collective organising finally stopped company repression. In Malaysia, Todd and Peetz (2001, p.135) explain that, to attract investors, “Industrial relations have been characterised by extensive state

control guaranteeing a high level of managerial prerogative within the workplace, minimal overt conflict and very little bargaining power for labour.” For 30 years, the microelectronics industry was exempted from national labour laws to attract transnational corporations and investments (Aminuddin, 2009; Wad, 1997). Only in 2010, after years of international pressure, did this change. However, the implemented law only allows regional unions, not a national one, and strikes remain forbidden in practice, as they require authorisation from the Malaysian industrial relations department (Bhopal & Todd, 2000; Luthje et al., 2013; Wad, 2012). No independent union exists in ST Calamba and Shenzhen.⁴⁴

In ST, back-end workers followed standardised processes which enabled ST to set sites in competition with one another. Etienne from Tours explained, “[ST] double-sources back-end products. It is a client demand. [...] at the same time that serves as leverage to lower costs and prices.” Effectively, back-end sites “bid” for product lines, competing with each other *and* with other assembly companies. Bilal, a Moroccan engineer, noted that, every three months, ST organises a corporate conference call to rate sites “according to accidents, worked hours, sickness leave, and productivity.” In Muar, workers said that they competed with Calamba based on productivity, quality and yield (notes, July, 2017). This created what Greer and Hauptmeier (2016) name *rule-based whipsawing*, that is, ST introduced formal bidding rules between sites for production loads and this weighed upon the interactions between back-end union representatives. In Malta, Liam explained that “management often uses the threat of competition between plants to detract from [the] union’s claims,” in other words, to imply that if GWU asks for too much, ST could relocate. If securing a product line is the carrot, the stick is offshoring, or *coercive whipsawing*, and this threat is not empty words. For instance, in 2005, the Ain Sebaa and Rabat (Morocco) sites were threatened with closure. Massoud recounted, “Managers said, ‘We are going to leave for Shenzhen.’ [...] They closed Ain Sebaa, because they said the site was no longer profitable and all the [chip frames] from Ain Sebaa were transferred to Shenzhen.” To fight against this plan, workers created a union. ST promptly fired its representatives (Bureau regional de l’UMT, 2005; Ghannam, 2005). The sites were closed and the Moroccan workforce was downsized from 4,800 workers in 2006 to 2,600 in 2012.⁴⁵

⁴⁴ See story of Calamba and report by Worker Empowerment regarding high turnover and working conditions in Shenzhen and Longguang in Chapter 4.

⁴⁵ Numbers are hard to come by, as the sites in Morocco and Malta are recorded as one unit in ST’s annual account. These accounts report 7,330 employees in Morocco and Malta in 2006 (ST Annual Report 2009, p.131) and 4,440 workers in 2012 (ST Annual Report 2012,

Unionists also cited geopolitical considerations and the influence of states in facilitating ST back-end sites' survival in each country. For Bilal, the size of the company in Morocco meant, "it isn't just 2,300 [sic] workers, there are people behind us [...] children, suppliers [...] it's not in the national interest to close [ST]." According to Aaron, a Maltese union representative, ST set up in Morocco because "the Moroccan government subsidised the plant, the utilities, the training of the employees and the pay for the technical grades." In Malta, Aaron explained, ST first "got the site for free, the infrastructure, they just paid the rent and they had a tax exemption for ten years," and then, following the 2010 turmoil, the Maltese state provided ST with €48 million worth of subsidies to preserve the Kirkop site (see Interlude 2 Malta). Citing broader geopolitical considerations, Charles argued that, between 2009 and 2013, ST transferred back-end activities from Singapore to Longguang (China) and reduced activities in Malta and Morocco because "for ST, it is politically useful to be in China, because they have loads of clients in China." However, such geopolitical considerations were mediated by changing labour costs. Just a few years later, ST started recruiting in Malta and Morocco, whilst it closed Longguang and transferred its activities to Shenzhen and Muar (notes, June 2018). Workers in Muar believe that the Longguang site might have been closed because of the fear of Chinese companies copying chips (notes, July 2017), whilst Nour in Morocco explained "before, the Chinese workforce was cheaper, now it's the contrary so [ST] wants to transfer the means of production because labour costs have doubled" (cf. Johnson, 2017).

Here, I showed that according to back-end workers their sites' vulnerability was shaped by the fluctuation of labour costs and that these criteria were mediated by technical knowhow, productivity and geopolitical considerations. Given the relatively greater reliance of back-end activities on labour costs, the company was able to draw upon *rule-based* and *coercive whipsawing* to extract concessions from unions (see also Interlude 2: Malta) and in Chapter 9, I show how this shaped union leaders' trust in one another.

c. Locating front-end sites

Currently, ST's R&D sites and fabs are concentrated in France, Italy and Singapore. In addition to the path-dependency characteristics outlined above, I suggest that the

p.102), a decrease of 2,890 workers. The Maltese unionists report 2,500 workers in 2004 and 1,600 in 2017, a loss of 900 workers. From this, I infer a rough estimate of 4,830 workers in Morocco in 2006 with a loss of 1,990 workers since.

continued presence of front-end sites in these countries is explained by (1) the need to preserve industrial secrets; (2) the importance of “scientific ecosystems”; (3) the capital intensity of semiconductor production; and (4) the importance of states as *both* regulators and funders. I examine these four factors in turn, demonstrating that they framed each site’s vulnerability and shaped front-end unions’ ability to recognise common interests.

First, given that IP blocks are crucial to the success of a company, only the least sensitive parts of design are offshored, whilst patentable R&D remains centred in a chip company’s home region to protect key designs containing proprietary algorithms (Brown and Linden, 2009). In Singapore, Chris, a union representative from UWEEI, explained that “it is still a challenge to get some of these big MNCs to transfer R&D function [here] because in the semiconductor industry there is this huge patent problem.” A state’s desire to retain control over certain IP rights, regarding both manufacturing techniques and chip design, may reinforce the force of path-dependency features of the location of companies’ front-end sites and tie in with a fourth factor, states’ intervention to protect their national technological competitiveness.

Second, Global North countries provide attractive settings where companies can access public research laboratories and workforces with technical knowledge, whilst the cost savings of offshoring engineering tasks are often offset by the managerial challenges which they prompt, such as the lack of face-to-face interactions, the cost of monitoring and the need for greater control procedures to avoid IP theft (Brown and Linden, 2009). Charles explained,

There was a time when [...] Pistorio said, ‘Recruit in India as much as you want. Now we recruit engineers in low labour cost countries.’ This increased the pressure on the Franco-Italian teams. [But] they rescinded [this decision]. As regards the creative and innovative process, it isn’t always about having teams everywhere, and, in fact, the [CEO] who does the best in ST [...] never recruits in India.

To explain the reasoning behind choices made about fabs’ locations, he added,

You need to be careful. You need subcontractors of a very, very good quality, the men [sic] who do the maintenance of equipment, training, cleaning, technical support. [...] You need skills, and schools that train good engineers and technicians.

The need for technical knowhow thus somewhat limits the mobility of semiconductor capital, in favour of regions with technical education institutes and scientific facilities (Lerner, 2009). Given the fabs’ large consumption of water and electricity, Brown and Linden (2009) add that fabs need good infrastructure and

reliable local planning systems. As noted by Coe et al (2004, p.47), regions may therefore be able to support the fixing of a fab in a place if they “are prepared to invest in developing the infrastructure and human resources required for value enhancement.” For instance, according to Reverdy (2014), Mr. Pistorio, chose l’Isere in 1992 for the expansion of ST’s R&D workforce in part because of the existing regional scientific ecosystem, which resulted from decades of public support and which, according to Emile, a former mayor, meant that l’Isere “[was] an exceptional site for microelectronics.”

Third, in contrast to back-end production, in fabs “labor typically accounts for 16% of costs, including depreciation in fabs producing 200mm wafers and less than 10% in the newer 300-mm fabs” (Brown and Linden, 2009, p.7). Indeed, with wider diameters, “the cost of the workforce is less and less significant” Charles explained “because automation becomes key to quality.” In the 300-mm fab, Louis from Crolles noted,

Robots load the machines, it isn’t people anymore. [...] It’s quite impressive, the robots are on the ceiling to avoid accidents, one just hears the movement of the robots, which go down, move, stop to let the other robot pass... It’s really like the ‘Fifth Element’!

Automation and associated high capital costs mean that the geographical variation in labour costs had become less significant. Chris noted, “whether you put the robot in France or in China, that robot is probably going to cost you the same amount of money.” What becomes important to locational decisions under these circumstances is whether the state will subsidise some of these capital costs.

Indeed, the last factor that contributes to the location of front-end sites concerns the uneven regulation by states and crucially, their levels of support. For instance, whenever ST dismissed workers, their uneven legal protection was exposed. Claire recalled, “we have closed a lot of sites, I guess all the sites that weren’t in a protected environment: England, the U.S...” In 2016, the closure of the digital division affected R&D sites in France, India, the U.S. and sales offices across Asia. In China, workers were dismissed without knowing when they would be required to leave and with minimal compensation, something which, quite exceptionally, they mobilised against.⁴⁶ Elsewhere, “for the Americans it was over in ten days, and for the Indians in one week” (Laura). By contrast, when reports of the plan were leaked, French unions succeeded in turning the layoffs into a generous voluntary redundancy plan.

⁴⁶ They circulated a picture in which they stood behind a banner, their heads hidden, and wrote a collective letter asking ST for clarity and fair compensation (notes, March 2016; June 2016)

According to Maurice, the French state intervened and “probably blocked the layoff plan in France, but let it go ahead elsewhere.” This intervention demonstrates that, for French ST workers, more than state regulation is at play: direct support and state control also matter.

The Italian, French and Singaporean states have provided ongoing and uneven support to ST, ranging from direct subsidies to tax breaks and development subsidies. In the 1980s, Eurotechnique – a precursor to ST – was offered 100 million francs to settle in Rousset following plans to revitalise this de-industrialising region (Lambert, 2013, p.91). In the 1990s, according to Daniele, ST drew on the available funds to industrialise the South of Italy in order to develop the fab in Catania (notes, June 2018, see also Daviet, 2000). In Singapore, Julie said, “[The rumour] was that, in comparison with France, there were huge subsidies from the government [...] and that’s why they went [to Singapore].” Damien corroborated Julie’s assessment, stating, “We had a design site in Singapore [...] because the state helped a lot.” Chris similarly claimed, “The Singapore government is very progressive in terms of trying to secure investments [...] [though] I don’t know what the goodies have been for ST.” I was not able to substantiate these claims; however, ST’s 1996 annual report (p.108) indicates that Singapore provided ST with pioneer status, which exempted its profits from taxes. I do not know if this practice continues. In Europe, funding came in the form of access to loans at low interest rates from the European Investment Bank (ST, Annual Report 2017), and, mostly, in allowing individual states to create national support programs, without infringing on the EU rules preventing member states from providing unfair advantages to companies. An employee from the Ministry of Industry explained,

[The French state cannot] finance production equipment because there is a European rule of non-competition between member states [...] so [we] only help companies through R&D [costs]. [...] We don’t finance jobs or the development of the company.

These rules have not stopped the French state from supporting ST. When needed, French public officials have come up with innovative ways to bypass European rules of noncompetition. Compiling all the subsidies received by ST reveals an astonishing level of financial support. Between 1994 and 2017, ST received €4.588 billion in subsidies in the form of tax credits, capital expenditures and R&D subsidies, with France providing the lion’s share: €3.4 billion (see Appendix 5).⁴⁷ These numbers

⁴⁷ Since ST’s Annual Accounts report public subsidies without linking them to distinct countries, the total subsidies provided by the French state may be greater.

demonstrate the extent to which the French government took an interest in this (semi)-private company, and re-emphasise how this industry's development is inseparable from geopolitical interests and state support. As I now show, these subsidies also reflect the successful ways in which unions and other local actors organised to secure ST's development in certain places.

For instance, in the 1990s, the continued existence of ST's Grenoble site came into question by SGS-Thomson managers as its characteristics (location, size, vibration levels) were deemed unsuitable to host the next generation of machines (Balas, 2009). Afraid that chip production would leave l'Isere, union leaders, the site's senior manager and local research institute directors lobbied local councillors and MPs to support the creation of a new production site in Isere. According to a union representative, unions gained the support of public representatives because the latter "understood that this industry, which they saw as cutting-edge, high-tech, could significantly develop the labour market" (in Balas, 2009, p.300). Guillaume explained that local politicians recognised the regional benefits that hosting ST provided: "ST has an impact on the local social-economic fabric. [...] One doesn't do semiconductors alone, there are loads of indirect jobs [...] and that, of course, interests politicians." The coalition successfully lobbied the French government to commit one billion francs to the creation of a fab in Crolles, just next to Grenoble, which would meet SGS-Thomson's technical requirements.

When the next investment phase was needed in Crolles, between 1998 and 2001, ST's Crolles director and trade unions lobbied MPs and regional representatives to secure the support for a new 300-mm fab in Crolles without having to "rely on the public subsidies which must be reported to the European commission" (C. Morel, personal communication, 19 September 2001; Prefecture Isere, 1999). Emile recounted, "We didn't give subsidies – well, we did a type of buy-to-let... It was a fabrication, a trick. [...] This took a long time and was under the control of the industry ministry, with direct links with Europe. It was really sophisticated!" Mayors created an administrative structure which enabled them to contribute €80 million to the building of Crolles2.⁴⁸ In exchange, ST promised to create six hundred jobs and invest €700 million (SMG2 and ST, 2001). The Frenchstate added €65 million worth of investment (Prefecture Isere, 2000) and, by 2002, announced a five-year R&D support plan worth €453 million. In addition, Crolles' director approached Philips and Motorola to create an industrial and R&D cluster combining the companies'

⁴⁸ Their investment evaded European rules because a public laboratory would use 20% of the building and because ST would pay a rent of €5.3 million/year (Reverdy, 2014, p.16).

investment capacities (Balas, 2009). They agreed – notably thanks to the speedy public subsidies offered. “Crolles2,” a 300-mm fab, was created. Following this, every five years, Mme Fioraso, a former MP, explained that “there was a strategy to develop this company regarding its technology” and public subsidies were funnelled into l’Isere to nurture a “French Silicon Valley” (Balas, 2009). In Isere, ST now employs approximately six thousand workers and supports some twenty thousand jobs indirectly (Reverdy, 2014). This story demonstrates the ability of workers as part of wider coalitions to fix capital in certain places. It also displays the French unions’ relatively high coalitional power, showing that whilst similar factors shape ST’s development, how they materialise, reflects the interplay between different actors and historical circumstances.

State support also came in the form of tax relief and, more commonly but no less valuable, tax leniency. In Italy, state support included greater access to credit (ST Annual Report, 2009, p.237), European plans for the development of the Southern region (ST Annual Report, 2007, p.40) and "the reduction of various governmental liabilities, including income taxes, value-added tax and employee-related social charges" (ST Annual Report 2013, p.157). In France, Charles noted that the French state had adopted a similar leniency regarding ST’s taxes, which “is a slightly disguised way for the French state to provide [...] hidden support [to ST].” Such tax leniency is supported by the internal cost-pricing system, whereby ST’s 74 subsidiaries (ST Annual Reports, 2017, p.86-87) can bill one another and relocate profits to where corporate taxes are low. Charles described the system,

All the costs of R&D engineers in Grenoble are invoiced to the financial hubs in Geneva or Holland, [...] so ST does really what they want, it is quite arbitrary, to organise tax evasion. [...] During all the years when ST made a big profit, they assigned their profits to Singapore [...] and ‘luckily’ they were in tax holidays there.

There is nothing particular about ST in this: most TNCs use transfer prices “to determine the distribution of reported income across different segments (divisions) of the firm” in order to “minimize [their] worldwide tax liability” (Hiemann and Reichelstein, 2012, p.3). Given how TNCs increasingly whipsaw states to provide favourable tax structures, it shows that the power of states to enhance regional *value* capture, as emphasised by Coe et al. (2004), is mainly about capturing value as jobs and their supposed externalities rather than value as paid corporate taxes.

These factors and their interrelation came alive for me when I tried to understand transfers of production between sites, such as the transfer of Rousset’s 6-inch fab

and testing centre to Singapore. Workers emphasised different pressures to explain this shift. For instance, David (CGT)⁴⁹ believed “these were products with a low margin, so if you save on salaries you save on everything.” Similarly, Rene (CGT) believed the offshoring of the testing facility was a result of labour cost because 150-mm plants were less automated than wider diameter plants. By contrast, Claire (CFE-CGC) emphasised that they,

had a period of site blockades that were tough. [...] That was radical, we had big clients [who said], ‘No, now this is too risky, you have to transfer the production elsewhere.’ And so we transferred all of the testing facilities because of that to Singapore.

Balthazar (CFDT), echoed her feeling, contrasting mineworkers with ST workers,

Miners when they blocked the mines, the mine couldn’t be exported elsewhere. The coal was under their feet and they blocked access. Discussion over. Here, once they [the CGT] did that in Rousset, [...] they chained the test centre. Result? It shocked management and for one-and-a-half years there were no longer any test [machines]. [...] The machine is on wheels and can move.

Both Claire and Balthazar stressed that it was militant union activity by the CGT which caused these facilities to close. Samuel (CFDT) introduced another consideration: “We can’t be competitive as compared to places such as Singapore [...] because Singapore is twice as likely as Europe to offer subsidies.” He agreed that, “Labour costs are not the problem. New fabs will be more and more automatic, as a result the labour costs to produce chips is negligible as compared to the cost of a fab.” Thus, workers offered three competing narratives to explain offshoring: one emphasised labour costs, another labour militancy and the last state support. The truth is probably a combination of the three, though there was an overarching acknowledgement that labour costs would factor less and less given increasing automation. These competing narratives demonstrate the complex interrelations between each factor that frames front-end production and that unions held different views regarding militant action. It also demonstrates how, despite high sunken capital investments, sites remained vulnerable to offshoring.

Given that each investment often took place at the expense of other fabs, tensions arose between unions about protecting sites. For instance, workers explained that the absence of investment for fifteen years in a 300-mm fab in Italy when Crolles2 was finished in 2003, strained union relationships (notes, November 2016). Similar competition was also present between R&D sites as activities were transferred from

⁴⁹ If I add unionists’ affiliations prior to their comments, it is because these comments also take place in the context of the conflict between the CGT, CFDT and CFE-CGC.

one site to another. Maurice observed, “[When that happens], there is a ‘country’ which will feel dispossessed. [...] I don’t think that it creates a deep nationalist resentment, but it leads to hesitations [towards greater collaboration].” When I prompted Thibault around collaboration with other sites, he answered,

The difficulty between Tunisia and Grenoble is that on one side they’re firing workers and on the other, they’re hiring. [...] Go collaborate on a matter like that [between] the union representatives from Tunisia and Grenoble! Everyone will be looking out for their site.

As such, front-end sites also faced competition for investments and activities and union representatives argued that this made collaboration on these issues complicated. Competition was not just between countries. In Italy, a long-planned investment in Catania worth €542 million was canceled in 2007 (ST Annual Reports, 2007, p.40), something which union leaders there linked to efforts in Milan (notes, June 2018). In France, workers perceived that the Isere sites were protected at the expense of other sites. Rene felt that Crolles had become the “display site, so they’re protected” from layoffs despite sometimes reporting low productivity. Emmanuelle agreed that “in France, Rousset doesn’t come first. [...] if there are investment or state subsidies, it will fall more to Isere than to Rousset, Le Mans or Tours.” Workers believed that the historical links between union leaders and MPs in l’Isere continued to protect the Isere sites (notes, May 2017). Thibault insisted, “The Isere MPs defend l’Isere, especially since [union leader] has good relations with them.” For instance, in 2012 when ST announced a redundancy plan, Thibault said that,

Everywhere, it was like don’t touch l’Isere. So, in reality the perimeter of the plan was [Le Mans]. For two years, we took the voluntary redundancy plans. [...] Because, simply put, the state invested in Crolles [...] and because ST is a company with the public participation of the state, the Ministry of the Economy needs to approve restructuring plans in France. [...] [The Minister] can’t politically say, ‘We give money [to ST], if at the same time [ST] ends jobs.’ [...] So you can’t touch Grenoble.

Arnault confirmed, “Grenoble is the French Silicon Valley. [...]Hollande [former French president] went to Crolles, ministers go to Grenoble.” By 2016, Le Mans’ union leaders decided that Le Mans “wouldn’t get caught twice” (Thibault) and be forced to bear the burden of all layoffs. The union worked with the site manager to lobby their local politicians to influence the governmental unit overseeing ST’s potential restructuring. As a result of their efforts, the 2016 voluntary redundancies mainly hit Paris and Grenoble (notes, May 2017). Whilst French unions represent all ST French workers, union leaders are workers located in specific sites. Their place-based identities resurfaced as they dealt with situations which they could not

challenge and just needed to endure. Workers thus acknowledged that they faced “spatial dilemmas” on the issues of investments, technological projects and IP rights, which secured the lasting employment of workers, and explained that these dilemma framed the potential for solidarity both within and between countries.

In summary, it is clear that ST back-end sites’ locations are conditioned by geopolitical considerations but mostly by labour costs, whilst front-end sites’ locations are determined by considerations around industrial secrets, the need for technical knowhow and, given the capital intensity of semiconductor production, state support. Whether enabling the presence of a scientific ecosystem, or providing subsidies and tax breaks, this support has successfully embedded “particular parts of the GPN” (Henderson et al., 2002, p.452) in specific regions, at least for the time being. These conclusions temper the stereotypical narrative of footloose capital scorching the earth for the cheapest labour, even in the labour intensive back-ends, and stress instead the *ongoing* role of the state in facilitating the chip industry’s development. The state’s interest, I argue, remains a crucial element to understanding the current geography of ST’s production and ST workers’ uneven power. I emphasise this point because it introduces another obstacle to international solidarity: if a great part of ST’s support comes from nation-states, the national scale will remain crucial for unions to exert power. Finally, I showed how ST had successfully introduced competition both between front- and back-end activities for production loads and investment, which led unionists to be suspicious of other sites, and to try to protect their sites’ survival, at the expense of other fabs. This discussion demonstrated how and why the varied economic, labour-related and political factors which inform the companies’ locational decisions also frame unions’ ability to organise together across borders and why these sectoral and GPN considerations remain key to understanding labour’s ability to build international solidarity.

Conclusion

In this chapter, I offered some of the vocabulary and the spatial and temporal contexts through which to understand ST, that is, some aspects of *workers' geography*. This description demonstrates the sheer variety and differences that are encompassed across ST's workforce. I drew upon these to expose the varied sources of power workers have access to, their varied vulnerabilities and the geographical dilemmas they faced. This vocabulary, I showed, is relational. It reflects the intersection of technological constraints, economic pressures, historical developments and geopolitical considerations, along with considerations around labour costs, capital investment needs, technical requirements, business cycles, relationships with clients and state interests at a range of scales. Yet how these factors intersect in the semiconductor industry varies: labour costs and territorial interests fluctuate in significance depending upon the stage of production, and, I showed, shape how sites compete for survival.

In attending to these factors, I highlighted how some states have actively intervened to alleviate the large capital costs faced by semiconductor production companies and thereby secure their domestic industries. Coe and Jordhus-Lier (2011) argue that geographers should embed labour's agency by considering states' roles as contexts of GPN activities. However, Glassman (2011) contends that this approach fails to consider that, because of specific geopolitical factors, states may play a greater role than just regulator (see also Horner, 2017). I demonstrated his argument for the semiconductor sector, and showed why it mattered to trade union power. I argued that the reinforcing links between semiconductor technology, capital and place, and the importance of semiconductors in national competitiveness and technological sovereignty have prompted some states to become active *political* agents and commit significant resources to enable the rise of semiconductor companies. To do so, they have embraced the roles of facilitators, buyers, regulators, shareholders, creators and funders. Whilst states always *mediate* the development and geographical organisation of capitalism, the semiconductor industries powerfully reminds one of the ongoing role of nation-state in enabling technological development, and as a result, in the functioning and growth of specific companies. Morgan and Sayer (1988, p.116) thus argue that "the conventional juxtaposition of 'state versus market' or 'government versus industry' miserably fails to capture the manifold ways in which the state shapes [the semiconductor] industry and constitutes its markets." Whilst this is an important addition to the GPN literature, and reminds readers that "the

global economy is as much a political formation as an economic one” (Coe, 2011, p.392), this interest of the state is not inert: it deeply influenced unions’ local realities, vulnerability and sources of power. Indeed, I show in Chapter 8 that French unions were able to protect their jobs by leveraging the state’s concern, in contrast to Malaysian workers, for whom the state’s attention has meant a restricted scope of union rights, and to the GWU which faced pressures from their state to accept ST’s deal (See Prelude 2).

Mitchell (2011) urges geographers to attend to the *conditions of agency*, embodied in the organisation and relations of production. In their comparison of transnational union activities across the maritime, car-making and textile sectors, Anner et al. (2006) claim that sectoral specificities conditioned both international competition between workers and their ability to collaborate across borders. They argue that “the different production and regulatory structures produce different sets of challenges and opportunities for unions and consequently result in different types of union strategy” (p.22). For instance, whilst maritime employers may hire workers from any country to work anywhere, motor manufacturing remains structured around industrial centres, prompting unions to maintain strong allegiance to their states and to “seek to structure rather than attenuate inter-plant competition” (p.8), in contrast to the global flexibility of clothing manufacturing which leads to “sporadic [transnational] campaigning rather than ongoing organization” (p.8) (see also Carmichael and Herod, 2012 and Lillie, 2004).

I suggest that, in the semiconductor sector, similar considerations condition unions’ ability to build inter-union power at the international scale. In the case of ST, I showed that back-end and front-end sites relate unevenly to capital costs and territorial actors: whilst back-end sites are more vulnerable to changing labour costs and thus to relocation whilst front-end sites rely more heavily on their nation-state’s support. In keeping with Anner et al.’s (2006) suggestions, I argue that ST’s global organisation, by encompassing different stages of production, *conditioned* the interaction between unions at the international level. Intra-union cooperation between each “end” is hampered by the state of direct competition for production loads or investments, whilst collaboration across each “end,” is limited by the fact that workers face substantially different tasks, wages and experiences of work. These differences, allied with the obvious inequalities between Global North and South locations, made it hard to imagine the drafting of common demands. As Olivier summarised the situation, “[working together] on wages or health benefits, I can’t even begin to imagine it!” Furthermore, the importance of the state regarding front-

end activities meant that the national scale remained a key source of power, not just as a source of institutional power but also because it was where unions were able to leverage the state's interest. This importance of the national scale acted as another condition regarding workers' ability, interest in and, crucially, willingness to internationalise their activities.

Hennebert (2010, p.55), in the context of the international campaign in a Canadian paper TNC, reflected that "workers in the different units of the multinational corporation perceive themselves more like competitors fighting to save their jobs than as an interest group which shares common goals, whose pursuit necessitates a concerted internal action" (see also Wills, 2001). I showed that this reflection remains true in the case of ST, and outlined the specific factors which conditioned this competition, showing how they varied across each end. Throughout the chapter, I provided a first attempt to embed labour within its GPN, trying to move beyond the description of difference to the explanation of why it matters locally for each site, but also for unions' efforts to collaborate across sites. Yet, this attempt is somewhat devoid of workers' experiences, opinions and contradictions and, more simply, *choices*. As I noted earlier, a company is a network of embodied labour (Cumbers et al., 2008). The world is not a static description: it is reworked and transformed, struggled over and accepted by people in general and workers in particular. The next chapter analyses how, in the face of corporate strategies to divide the workforce, workers variously grappled with their local, national and international divisions.

Interlude 1:

Rennes

Opened in 1967, ST operated a 150-mm manufacturing plant in Rennes, which employed 600 workers until 2004 (Debontride, 2004). Damien remembered,

Pistorio really loved Rennes, because he had been financed by the French government there [...] [The French location of the fab] largely contributed to the fact that Pistorio took the management of ST [when Thompson and SGS were merged] so Rennes was a little darling [...] but Rennes sadly was this tiny factory [...] now in the middle of the city with two primary school on each side. [...] But a semiconductor company is dangerous, there is arsenic, rare metals, gas...[...]So we said, ‘this fab we can’t leave it there, and it has become too small so we are going to close it.’ [...] It exploded [socially]. It was a terrible divorce.

After 37 years of continuous production, workers were told in August 2003 that the company was “‘studying’ the end of production on the site” (Debontride, 2004). The company planned to develop a new fab in Singapore, which would host both the production of 150-mm wafers then produced in Rennes and a new 200-mm line (Debontride, 2004). When I asked Nathan from Rennes whether they had foreseen the closure, he said, “No, not at all [...] because we had very good yield, costs were quite good. But we had to increase the number [of wafers] and everything [the machines and products] was sent to Singapore.” The Rennes fab was fully loaded prior to 2003, which worried Raphael from Grenoble, since profitability was often a criterion that prompted alarms about a fab’s future (notes, March 2017).⁵⁰ Yet local union leaders ignored Raphael’s warnings, blinded by the profitability of the site.

⁵⁰ Raphael explained that high productivity yields may mean that machines have been fully depreciated and fabs generate clear cash since they no longer have to pay off previous investments, but that if this cash is not invested in new machines, the entire production line soon becomes obsolete. As a side note, the Rennes story demonstrates, in almost painful ways, how sunk capital can become obsolete and thus require being destroyed, even when it is producing *profits*.



A ten-month long struggle ensued. Unions pointed to ST's reported revenue of €9 billion, €1 billion of profit and €3 billion of disposable cash, to pressure the French government into protecting their plant. The senior manager regurgitated the usual offshoring discourse:

To be able to continue to invest in the most-advanced technologies, be that in Grenoble, Aix-en-Provence [France] or elsewhere in the world, ST needs to rationalise its production. Sometimes, there are decisions to be made. The responsibility of the company is its responsibility as regards the 43,000 workers of the company not just the 400 people in Rennes. (interview on France 3 Rennes, 2004)

His answer is interesting in that it counterposes the decision to offshore production to Singapore with that of future investment in France and draws upon the issue of other jobs at stake across ST to justify this move. Whilst this might be merely a discursive strategy to present the company as still committed to French sites, it also offers an interesting thought experiment suggesting that French workers' higher wages are subsidised by workers' production elsewhere, which Harvey (2019) clearly argued in the case of the transfer of value in the software industries.

Workers held demonstrations in Rennes, Paris and Crolles. Some occupied the factory, three started a hunger strike. Anger built up. Workers felt betrayed: ST now stood for 'Salaries Trahis' - Betrayed Workers and 'Salaries Sans Travail' - Workers Without Work. An employee declared on TV, "I gave 31 years of my life to this company. I believe that they shouldn't kick me out like this, like a dog" (France 3 Rennes, 2004). Her words remind us that work is more than employment and a wage; it comes to represent people's life and dignity.



Caption: The placard reads: “600 layoffs”, ST subsidised, State shareholder and accomplice???

The state did not react. Rather, the Finance and Economy Ministry declared that the layoff was part of the free play of global competition and that the state couldn't interfere (Debontride, 2004). In April 2004, 450 people lost their jobs, 50 were moved elsewhere within the company and 50 stayed to continue a back-end role for high security military and space components, since, according to Philippe, “We were qualified by European Agencies, we often made components for satellites and [European Agencies] didn't want to cancel that.” The combination of the location of the Rennes plant (in a city centre with little room for expansion); the size of the wafers produced in Rennes (150-mm wafer production requires cheaper machines and thus labour costs form a greater part of total costs); and the acceptance by the French state of the “forces of globalisation,” sealed the future of the site, despite workers' vibrant struggle. The fab was closed, leaving enduring rancour between unions. Thomas remembered that on the day of the vote for the redundancy plan, “[the representatives from one union] went to drink champagne with management, we saw them. That leaves traces.” This symbolic exchange felt bitter.

The relocation of Rennes' production mirrors traditional accounts of globalisation. As the fab became obsolete, the race towards cheaper labour drove capital (and jobs) out of its Global North location, potentially guaranteeing the company's overall survival and profitability. Thus, as much as I emphasised above the fixity of capital given semiconductors' capital costs and geostrategic importance, in some instances capital does also move, despite workers' best efforts.

Chapter 6:

Unpacking ‘labour,’ workers, unions, and power

Encouraged by Cumbers et al. (2008) to understand the varieties of labour positions, this chapter turns towards the relations of production between workers, unions and management. Since inter-union power relies on unions creating mutual interests and since these interests are informed by unions’ local realities (Brookes, 2013b; Kay, 2005), I consider the range of identities which overlapped and informed unions’ *local* organising efforts, and analyse the local labour-management relationships, to embed unions’ ability to collaborate *across borders*.

In Section 1, I examine the situation of front-end sites, where I show that the division of labour into operator and engineer categories, along with corporate tactics, challenged unions’ ability to create mutual interests amongst workers. I then examine some aspects of the positionalities of back-end site workers, with a focus on gender, religion and, in Muar, the use of migrant workers. I argue that these characteristics informed workers’ ability to organise through their union at the local level, either by further sustaining a collective identity beyond just a class identity, or fragmenting the workforce. In Section 2, I analyse the different stances that unions chose – I use this term to refer to how unions conceptualise their role and relationship with management – and understand these choices as ones made in a context of the undermining of militant unionism by corporate tactics. These various stances towards management matter, because they shaped unions’ ability to collaborate locally and their appetite for international collaboration. I argue that attending to local contexts requires both understanding workers’ socio-spatial positionalities and unions’ stances, amidst ongoing corporate tactics to shift workers’ and unions’ loyalty towards management rather than to their “class.”

1. A fragmented workforce

Here, I show that workers' varied socio-spatial positionalities challenged the unions' ability to build intra-union power. I focus on the operator/engineer division in front-end French sites, because unions stressed that it was the main factor which challenged their organising, given the even split in the workforce between operators and engineers. I focus on the significance of workers' gender, religion and migrant status in Muar and Bouskoura. I do not look at other back-end sites because I do not have detailed data for the Philippines and China,⁵¹ and because in Malta the predominantly male workforce negates analysing gender disparities.⁵² Rathzel et al. (2014, p.241) argue that "for there to be groups of workers who can be used against others, there needs to be processes of excluding groups of workers which makes them vulnerable to management strategies." Consequently, I also discuss how ST's strategies drew upon specific aspects of workers' positionalities to undermine workers' ability to recognise common interests.

a. Workers in front-end sites

The division of labour between blue- and white-collar jobs, whilst being somewhat arbitrary, administration-based and ambiguous (Scott, 2014), still reflects persistent inequalities between workers (e.g.: in France, Amossee, 2011; Bouffartigue and Roux, 2011; in Britain, McDowell, 2009). White-collar workers, defined as such by their so-called intellectual tasks or their management responsibilities, have been symbolically recognised as a successful and upwardly mobile workforce, and encouraged to think of themselves as of "higher value" than blue-collar workers (Boltanski, 1979a, 1979b; Denis, 2005). Socially, politically and economically, white-collar workers have been, and still are, pushed to organise in separate unions; to side with corporate management;⁵³ and to privilege negotiation over direct action

⁵¹ The ST Shenzhen site report showed that the workforce was mainly composed of migrant workers. The organisers and workers I met suggested that Calamba's workers were predominantly women, but given my limited data, I cannot provide greater analysis (see Kelly, 2001; McKay, 2004).

⁵² To explain this pattern, one may look at Maltese national statistics, which indicate a low female workplace participation of 27% in 1990 (World Bank, 2019) whilst in industrial work, where night shifts were prevalent, the figure might have been even lower. Further, given that, until recently ST was the largest private employer in Malta and associated with strong symbolic recognition, historically men have been encouraged to work there. This pattern may have continued through informal mechanisms.

⁵³ For instance, Boltanski (1979b, p.100) quotes a pamphlet destined for white-collar employees, which argued, "The engineer is a boss: he [sic] must serve and command, both terms constitute the force and stature of a boss." He adds that white-collar unions in France first organised against the CGT and the Community Party.

in order to show their openness to reasonable proposals (Boltanski, 1979a; Denis, 2005; Thoemmes & Escarboutel, 2009). I argue that ST workers' experiences, in the context of various corporate tactics, led them to reproduce and uphold the division between operators and engineers. This meant that organising workers locally was already fraught with difficulty, let alone organising internationally.

In front-end sites, interviewees emphasised that operators' and engineers' different experiences of work conditioned their interests. David, an engineer, contended that, "The preoccupations aren't the same, the working conditions aren't the same." Operators followed a shift-rotation schedule to ensure that fabs are producing around the clock. They had regimented lives in a tightly controlled environment where they were covered head to toe by protective gear. By contrast, engineers worked in open offices and had longer but more flexible hours, higher wages and more autonomy.⁵⁴ Interviewees argued that, beyond entailing difference, workers' various working conditions challenged camaraderie:

An engineer will be able to go to the 'social centre'⁵⁵ at lunch time, to take time to eat, go running... An operator, if he [sic] is one minute late, he is called in. [...] [In the morning], operators come down for breakfast at 8:30am, they see [engineers] coming in to start the day, it's a friendly moment but if [operators] ever take a minute more for the break [they get reprimanded]. (Louis, operator)

Operators, when they leave the clean room, all at the same time, en masse, they see engineers who are putting on their running shorts, when they [operators] are timed to the minute and that they have 30 minutes for the lunch break and every bonus is taken away or 'offered.' [Operators see engineers] and say: 'They're the well-to-do' [...] [Office workers] have a lot of latitude in [their] work, [whereas, in the clean room] [...] your rate of work is measured almost by the second. (Otto, operator)

The differences challenged workers' ability to see themselves as sharing similar interests and experiences. A comment by Thomas, who had experienced both sides as a technician, showed how strongly this "class war" was felt:

The comment of the standard operator is, 'Ah, those white-collar fuckers [...], they take their smoking break whenever, they're paid better...' It's already a class war. Really! It's spontaneous, everyone says it. [...] The engineer, he [sic] doesn't even understand...

⁵⁴ In France, wages for OATAM range between 18,168 and 33,523 euros/annum, whilst engineer wages range from 29,229 to 77,568/annum (CFE-CGC Crolles, 2018). Each category had a different bonus structure which increasingly relied on individualised bonuses.

⁵⁵ A company-funded office with literature and access to corporate promotions and cultural activities.

[mimicking]: ‘What does [an operator] want?!’ It’s just a different world.

This division was important because it undermined workers’ ability to act together. Etienne, an engineer, explained that during a strike in the 2000s, operators had walked out, but

Workers in the offices didn’t walk out [...] We could feel the division. [...] That’s when I started to get interested, ‘Who are these people, what do they do?’ [...] I knew we had a fab, but (laugh) we don’t see each other. Their hours don’t correspond to ours, they go eating before us. We cross[ed] over, but until then, I had never asked myself what they did!

Differences between workers’ mundane rights and workplace routines thus served to separate operators from engineers, and this sense of distinction was cemented by workers’ practices of standing in solidarity with one another *or not*, illustrating the interplay between the conditions workers face, here a given technical division of labour, and their choices.

Workers suggested that their varying experiences brought them to focus on different issues, and these differences often came with a sense of superiority from engineers. Sophie, an operator, claimed, “We just don’t have the same issues,” to which Daniele, an engineer, added, “Operators mostly have physically-related stresses, when for engineers it will be more the mental stress.”⁵⁶ Claire, another engineer, argued that engineers are “a professional category where [...] there is a need to recognise work beyond the money, knowing where we are going, why I’m working.” She contrasted this with operators, for whom “the [work] risks will be physical, [...] [and the demands around] working conditions [...] and loads of financially-based demands: ‘Pay me [for] my break time, my thingamajiggy bonus, etc.’” Claire’s distinction suggests that operators focussed on “lowly” monetary bonuses whereas white-collar workers sought non-monetary recognition and a purpose. Importantly, this prejudice took place within a social narrative regarding engineers’ superiority and within a company that worked to dent working-class traditions and encourage workers to internalise corporate goals.

Indeed, Louis criticised some engineers who “will have a bit of a haughty attitude,” whilst Edern, an engineer, suggested that, in some engineers’ minds, “We’re still the

⁵⁶ To put this comment into a broader context, Delmas (2011) assesses whether white-collar work is more stressful than blue-collar work and argues that this discourse stems more from unions’ desire to mobilise a greater number of white-collar workers, rather than from reality.

1950s-60s, [with] the engineer who manages, directs, commands. [...] So in the offices, there is this belief that people in the rooms [operators] are plebs.” Engineers’ sense of superiority was packaged with an emphasis on careerism that was sold to them throughout their education. Martin recounted, “As white collars, during our training, our brains are stuffed with this discourse that ‘We’re the best [...] you need to be the best, to crush others.’” Yet, Guy, another engineer, objected to the dream he was sold that promised that, “in ten years, you’ll have a team of fifty people, you’ll be the leader, you’ll be on the other side.” Instead, he emphasised how it prompted engineers to forget “that he [sic] is a working-class person, well-paid, but with all the risks that confront all workers in a company, to be fired, to have a boss who tells you to do this, or to shut up or get out!” These quotes suggest that engineers’ sense of entitlement is reinforced by social and corporate discourses, which encouraged engineers to think of themselves as on management’s side, and, if not in the upper echelons yet, on the road there.

This discourse forms part of a corporate *interpellation technique*, by which I mean a discourse that encourages workers to conform to and perform an idealised work identity. This identity benefits the company *and* undermines workers’ ability to acknowledge their difference from and conflict with management, since they see themselves belonging to that class or at least do not see themselves and management holding different goals (McDowell, 2009). Management’s interpellation techniques are effective, in part, because work is more than a means of making a living. People want to do their jobs well (McDowell, 2009). Rathzel et al. (2014, p.199) call this relationship towards work “producer’s pride” and found that management was “able to use the workers’ interest in their work as a means of identifying with the company.” Similarly, in ST, managers used workers’ concern for their work to undermine the case for organising. For instance, an engineer recalled how “we lived an exciting adventure [in the EFCIS and CSF labs]. All these people were driven by something other than their strict personal interest” (in Balas, 2009, p.209). The lab director drew on this sense of technological significance and workers’ concern for the work to discourage workers from organising, proclaiming:

As regards your union activities, you are free outside but here, there are no strikes, we work like in a family. What we are doing against foreign competition is really hard. We don’t have enough money. If you want an independent semiconductor industry to exist in France, we are probably the only hope [...] You can’t have trade unions activities [here] [...], because you will break a fragile institution. (in Balas, 2009, p.202)

Emphasising their work's technological significance, the messaging here suggested that union activities undermine *work*, and presented unions as outsiders at odds with workers' interests (see similar story in Mitchell, 1996). Management's interpellation technique works by stressing workers' producer pride and suggesting that union activities will threaten workers' ability to do their job well, pushing workers away from their class interests and towards internalising managerial ones. I show in Chapter 7 that this feeling cuts both ways, since workers' pride and concern for work became crucial to their resistance to ST's financialisation.

At the same time, corporate discourses and practices also aimed to delegitimise blue-collar traditions, notably by controlling the imagined properties of their factories' landscapes and suggesting that ST differed from traditional industries. For instance, in Rousset, Lambert (2013, p.86) explained that Eurotechnique's director emphasised the need "to get away, at any cost, from the spaces marked by the stigmata of industrialisation [...] and avoid the presence of working-class traditions." Rousset is close to but separate from Gardannes, a mining town whose industrial fabric collapsed and where the CGT retains a militant base. Similarly, when ST transferred its fab from Grenoble to Crolles, it chose the opposite shore of the river from traditional paper, glove and electro-chemical industries (Reverdy, 2014). Not only did ST apparently attempt to avoid industrially marked landscapes, it also attempted to stop the transmission of militant traditions within ST. At first, when Crolles was created, ST halted the transfer of known union leaders to Crolles to create, according to a union leader, "a site free from [Grenoble's] history, [because] the operators [in Grenoble] had led strikes and [ST] did not want to import a culture of conflicts into the heart of Crolles" (in Balas, 2009, p.288). Workers waged a fierce battle for their unionised colleagues to access positions in Crolles (Balas, 2009). Workers also embraced ST's portrayal of itself as different from other industries. For instance, Yvan, when walking into Crolles, felt, "this is incredible, we are in a high-tech company, it's not like basic metalworking industry." Damien's utter surprise at the emergence of the militant resistance in Rennes also encapsulates this sense of distinction that proclaims ST belongs to a different type of industry, one that is foreign to working-class militancy. He claimed: "I nearly got hit by a train bolt in the head. [Workers] were throwing them everywhere, they broke windows. ... It was like we were in a CGT of the 1950s steelwork industry or the mineworkers under Mrs. Thatcher. It was just unbelievable!" These accounts expose the ways in which ST senior managers sought to portray the semiconductor industry as distinct from other industries and one where blue-collar traditions are out of place, a dichotomy

which some workers internalised. This demonstrates how the control of space is inseparable from that of memory and that both memory and the imagined properties of a landscape are a source of power in companies' attempts to stifle workers' organising efforts.

Not only did the technical division between workers decrease their sense of a shared community, it also led them to have a divergent sense of power, a divergence which further constrained their ability to fight together. Operators felt that they could stop production, provoking immediate delivery issues. By contrast, engineers often felt that any strike would only lead to greater pressures later on. Martin, an engineer, observed, "We're far from the client, very far from production where it 'hurts' in a way. [...] We don't have a direct impact on the numbers [...] or in six to nine months [...] [so] if we take three weeks off, [it doesn't really matter]." Daniele agreed, "An operator can strike and it harms the company, but if an engineer [goes on] strike, you're going to do [the work] tomorrow." Gauthier explained that this led operators and engineers to favour different tactics, and challenged unions' ability to suggest common modes of action:

[White-collar workers] believe it's useless to organise partial strikes [and that] we should use other means and then operators [...] say, 'This is our only leverage point, the only way that the company will hear us.' And for [operators] not going on strike is embarrassing!⁵⁷ [...] [The CFDT] will have to reconcile demands, maybe it'll be a partial strike, not for a month but for two hours.

Daniele added that each workforce held different approaches regarding how to achieve greater rights, "[Engineers will also have] an individual vision, because the bonuses are individually set. For operators, collective action is more evident, because you can win stuff for everyone..." Workers' job status thus framed how easy it was for them to collectivise issues and to imagine collective action to achieve their demands. Engineers' attitude towards striking reinforced operators' impression that engineers would not support their actions, and this increased their resentment, since engineers faced fewer restrictions. Etienne said,

[When operators] go to an [union] assembly, they do a partial strike for two hours, that's two hours off their salary. [...] Engineers, they don't even clock in their lunch break and then you see that very few stop to listen [to the assembly].

⁵⁷ The literal translation is "not going on strike is like pulling one's pants down."

Otto explained that when they, operators, had organised a strike, “engineers didn’t show up and rather complained about having to cross a picket line...” Another time, Rene remembered how engineers had even undermined a strike by operators.

Engineers said, ‘Why are you doing this [striking], you will kill the site!’ [...] We [operators] blocked the entrance together. [...] The other operators weren’t the issue, it was more the engineers and low-level managers who attempted to force through. I remember, we were all together, our backs turned, and my manager was hitting my back!

This incident illustrates the effectiveness of ST’s interpellation techniques and its portrayal of union activities as menacing to a site’s future, as well as the real divisions of interests and organising cultures between the two workforces.

Unions had to negotiate these clashing cultures. In the CGT, Baptiste explained that before he joined, “Comrades made a number of political mistakes, saying that ‘if you [engineers] aren’t with us, you’re against us’ which created a lot of cleavages and made it hard [for engineers] to become members.” Laura claimed that the operator/engineer division also challenged local branches’ efforts to collaborate. She recalled a discussion with CGT representatives from Rousset,⁵⁸ “They told me that when you [engineers from Grenoble] write flyers, [the flyers] are incomprehensible for operators.” Despite telling them that they, in Grenoble, could help them to write flyers that spoke to engineers, the Rousset branch had not “seized these offers, when we’re on the same team” (Laura). The CFDT faced similar tensions. When union representatives met in Rousset to ratify which union would control the social centre, one blue-collar CFDT representative voted for a CGT operator rather than for a CFDT engineer, favouring their blue-collar belonging over their union membership (notes, March 2017). In Italy, CGIL representatives described their difficulty in recruiting engineers (notes, May 2016) and, during my last visit to Agrate, workers explained that a new union had splintered from the CGIL to specifically represent operators (notes, February 2019).

There were, of course, other distinctions between workers. Excerpts show that many interviewees had a gendered perception of semiconductor workers, which is reflected in the lower proportion of women in the workforce, the continued gender pay gap and the glass ceiling women face (CGT, 2019c).⁵⁹ Interviewees mentioned a rising

⁵⁸ Rousset’s workforce is roughly evenly split between engineers and operators. The CGT mostly represents operators, whilst Grenoble predominantly employs engineers.

⁵⁹ In the TUN February 2019 meeting, French representatives reported that 5% of workers are temporary workers, and the gender gap in salaries is around 24% (CGT 2019b)

proportion of workers with temporary contracts, who were more wary of organising (notes, March 2017). Workers recounted that ST increasingly promoted individual approaches to work, dividing workers. Jules explained, “They manage to oppose the workforces, to divide them,” by emphasising “individual recognition, by merit, rather than the team’s performance.” In production, Otto described how each team had activity monitors, which managers used to set teams in competition with one another, a competition which “detract[ed] from organising.” Alessandro added that ST had introduced hierarchies within teams “to fool people that if you act well and work hard, you can have a nice career. [...] There is no production need [for these categories], it’s just to keep people [aiming for a] career,” and, when doing so, not to organise. Individualisation also happened through privileging the variable component of workers’ wages, such as bonuses and increments, rather than general *salary* increases (CGT, 2018a, 2018c, 2018d). Louis explained the consequences these discretionary increases, determined by managers, held for mobilisation: “We have a workforce which bit by bit, with the individualisation and everything being based on merit, feels like it’s better not to stick your head out, ‘I’ll try to scramble [a promotion] by seducing my manager.’” Giraud (2013) argues that the introduction of performance-based bonuses is a deliberate corporate tactic to undermine union action, as it individualises the waged relationship, whose general application to workers was a crucial victory of the labour movement.⁶⁰ Bourdieu (1996, p.89) adds that merit- and productivity-based bonuses “may be effective as much for [their] ability to distinguish between people as for [their] economic value.” The unions posited similar impacts of ST’s focus on individual bonus, which they claimed, encouraged workers to think about individual gains rather than collective ones and divided workers by setting them in competition with one another and undermining their sense of common interests.

The discussion above illustrates that specific aspects of front-end workers’ socio-spatial positionalities, most notably the operator/engineer division, challenged their ability to see shared interests and divided their power. Operators and engineers had different experiences of work, needs, and ways to organise, and were sometimes prejudiced against each other because of ongoing experiences and corporate discourses. These differences were not intractable: most unions – except the CFE-CGC – organised both workforces. Nevertheless, this division meant that, prior to

⁶⁰ Didry (2016) demonstrates how this relationship was an *achievement* of workers’ struggle. He claims that workers’ gained standard contracts as a result of legal battles, which gradually led the way to workers sharing a contractual status, rights and protections and to face (and thus be able to organise against) a single employer.

thinking about shared interests with other sites, unions confronted the question of how to create shared interests across the workforces. Donald described his bewilderment at imagining workers, joining actions in solidarity with other sites

Honestly, it's already hard to get [employees] to join [the union] on issues that concern them directly [...] They have a hard time reacting at the local level, at the national as well, so at the international level... you're swimming in sci-fi.

His reaction stresses why workers' positionalities matter: not only are unions unevenly positioned in ST's network of production, they also confront different challenges in terms of building intra-union power locally and these difficulties challenged the workforce's ability to support international solidarity actions. Laura thus stated she had low expectations for international collaboration because inter-union collaboration at the *national* level was already so hard to achieve (notes, May 2015). Importantly, such fragmentation was encouraged by managerial tactics which aimed to shift workers' loyalties, whether through interpellation, denigration or individualisation and which, I show in Section 2, management combined with discrimination and favouritism.

b. Workers in back-end sites

Workers' gender, religion and, in Malaysia, legal status,⁶¹ shaped workers' organising, because of the wider social contexts and corporate strategies at each site. ST's employment policies in Muar and Bouskoura reflect the broader trend of microelectronics production. In Muar, they hired a disproportionately large number of women and migrant workers, a pattern which workers and HR managers explained by pointing to gendered stereotypes around women's so-called natural dexterity. Harith, an HR manager explained, "semiconductors are small parts and require patience to handle things carefully." Afiq, a union leader added, women "have nimble fingers," whilst Imran claimed "this is the nature of the job, it isn't too physical or demanding because it's automated so it doesn't require much strength

⁶¹ Whilst back-end sites feature a technical division of labour, the lower number of white-collar workers and the fact that EIEUSR only represent operators and technicians made this division less significant to unions' organising efforts and thus to my discussion. In Morocco, the UMT does represent white-collar workers. The few engineers I interviewed held views that resembled those of front-end engineers. They criticised strikes and emphasised the need to privilege communication. For instance, Daoud, a supervisor, said:

"[Some union members] stopped two-three days, organised strikes, which I didn't like. [...] When there was an issue during Ramadan, we stopped [work] for one hour. [...] [Because] I felt confident that we could get the production load of the day [and walk out] without slaughtering [sic] the factory."

and women are more patient.”⁶² One sees workers and HR representatives mapping specific “natural” characteristics onto gendered bodies, which then positions some workers as more suitable to specific tasks (McDowell, 2009). Scholars argue that although companies put forward this gendered argument, they favour hiring high school graduates and single mothers who are “family bread winners,” because these workers are seen as more dependent on the income they earn and less able or willing to organise for higher wages (Elias, 2009; Kelly, 2001; Luthje et al., 2013; McKay, 2004). Jenkins (2015, p.209) argues these employment patterns are

Designed *from the outset* to take advantage of the socio-economic deprivation of young women in their society. Disempowerment is perceived as a desirable feature of the ideal worker, being associated not only with women’s low cost and supposed compliance at the workplace but also their greater distance from access to representation or employment rights.

ST women workers saw their relative disadvantages as linked to their lesser professional mobility and relationship to their husbands. In Morocco, Aya explained, as women, “We stay until retirement [...] [finding another job] is hard, you have to start training from zero, with kids and all that” and added, “[women] work for a lower salary [...] [and] stay, whereas men move, they get experience and go elsewhere.” Imran, from Muar, claimed that women accepted lower paid jobs to complement their husbands’ income and were somewhat harder to organise because “they need to ask for the permission of their husband or father” before getting involved (notes, July 2017). Thus, ST’s gendered pattern of employment drew upon broad social patterns embedded in the society in which the factories operated, to employ a seemingly more malleable workforce which would accept the minimum provision offered by ST. Workers’ creation of unions illustrates that these women did not conform to the docile bodies dreamed by a corporate vision (see Appendix 6 describing the rise of the UMT and EIEUSR).

In both countries, workers’ religion informed their organising. Imran explained that one issue that motivated workers to vote for EIEUSR in 2010 was the demand for an on-site prayer room and access to the mosque for the Friday prayer (notes, July 2017), a point which Syahmi, a technician, emphasised when praising EIEUSR: “The union allowed us to go to the mosque.” In a similar fashion, in Morocco, religious issues

⁶² This was also the case for early front-end fabs. Moreau (2006) outlines how senior managers justified the choice of St-Egreve (France) for the original ST facility because they argued that women from the local glove industry would have the appropriate dexterity to handle the small components. Daviet (2000, p.138) similarly argues that the semiconductor industry developed in Milan notably because the mostly female textile workforce was “used to minute tasks, [and thus] perfectly suited the production of LEDs and transistors.”

also brought workers to support unionising efforts: when workers first occupied the factory, they also demanded that management provide them with a break to attend the nearby mosque for Friday prayer (notes, January 2016). In spring 2017, workers organised three weeks of partial strikes to prevent management from changing the agreed custom of stopping work an hour early during Ramadan, which brought “management to backtrack” (Massoud).

Religion therefore energised union activities by providing workers with shared demands, and, as Wills, (2008a) notes, sustained class politics. In Bouskoura, many workers further articulated a caring community through Islamic values (notes, January 2016; February 2017). Hosni stressed, “It’s our culture, union makes one strong, even in Islamic proverbs, union is strength.” In Muar, religion played a more problematic role in creating a common identity, as it interacted with workers’ ethnic identities and prompted resentment from non-Muslim and non-Malay workers. Diyana, a former union representative who was a Catholic Indian claimed that “many Chinese, Indians, and Sarawak Malays⁶³ don’t join the union because they think it only favours Malays.” She was angered by an instance when, “the union asked HR to cancel the bonus [workers received if they worked on] Hari Raya [Malay Muslim festival] and implement a bonus across the entire month, [...] because Malay people who took the normal Hari Raya holidays of one week did not get the bonus.” Managers cancelled the bonus without offering a replacement and non-Muslim workers lost this significant increment. Such tensions exist in the context of Malaysia’s history where first during British rule, and then, as a feature of the development strategy of the state, authorities provided Malays with special access to education, employment and land (Bhopal and Todd, 2000) and unions principally developed amongst Malay people (Ganesan, 2016). Workers’ religious identity thus both sustained, and in the case of Muar, challenged, workers’ ability to rally behind shared demands, illustrating the ways in which workers’ values and contexts shape the deployment and effectiveness of unionisation.

In Muar, EIEUSR leaders reported that workers were divided based on their legal status. Malaysia has developed a migratory regime which eases the ability of migrants to work in Malaysia and binds them to a legal status with fewer rights than Malaysian nationals (Luthje et al. 2013; Pye, 2017).⁶⁴ In ST, a sixth of the workforce

⁶³ Sarawak is a Malaysia state on the island of Borneo.

⁶⁴ As regards this phenomenon, I was only able to analyse Malaysia because: (1) there was no migratory regime in Morocco, (2) whilst there were a number of (European) migrant workers in Malta, they had the same rights as local workers, (3) I lacked data on the Philippines and China.

are migrant workers, mainly from Indonesia (400 workers), Nepal (50) and Sri Lanka (150). Migrant workers and a union organiser agreed that ST provided relatively decent terms of work for migrants. The company offered training, housing and set holidays, paid workers' visa costs and even provided compensation for an injured migrant workers' family (notes, July 2017). Manish, a Nepali migrant said, "ST takes good care of us, they pay for everything: evening meals, housing..." He, however, felt isolated, remarking, "as a Hindu, I feel victimised. There are mostly Muslim and I'm scared of starting relationships with women."⁶⁵ Some Malaysian workers criticised this treatment as preferential. Afiq explained, "I'm jealous that migrant workers receive the same pay, but no bills, no housing [costs], just food costs, so it's much better for them." Migrant workers, whilst well treated, were relatively isolated from other workers, and, as indicated by Afiq's comment, potentially seen as privileged, which challenged workers' ability to create intra-union power.

ST, I argue, employed migrant workers, not because it was cheaper, but rather because it was relatively easier to control them, and whether this was deliberate or not, employing migrant workers drove a wedge between the workforce. Given that migrant workers cannot switch employers (Pye, 2017) and, unlike Malaysian workers, are contractually bound not to marry or have children, they are less able than Malaysian workers to leave ST. Imran explained, "All migrant workers are bachelors [sic], if they are pregnant, they're sent back." Akmal, an HR manager, said, "Migrant workers are more reliable, will work on holidays and are less likely to shift from company to company. [...] We would like to employ more local workers, however many don't stay, they continue for further studies or get married." ST managers thus used the migrant workforce to reduce their vulnerability to Malaysian workers' turnover, and, whether wilfully or not, to undermine Malaysian workers' marketplace power, since, if migrant workers were not available, to reduce turnover management would have to consider increasing wages or improving working conditions. Further, migrant workers' contracts extend to a *maximum* of ten years. This temporality meant that their aspirations often diverged from those of the more permanent local workforce. Whilst the former start young (maximum recruitment age is 25) and use their limited time in Malaysia to support their families and save up to create a business at home (notes, July 2017), permanent workers will potentially age within ST. Speaking of Indonesian migrants in Malaysian plantations,

⁶⁵ Again one sees an illustration of the additional division that workers' religious differences prompted, and how Nepali workers were "triple" marginalised to an extent, as men, as migrant workers and as Hindu.

Pye (2017) argues that their temporary position leads to a “temporal fragmentation” which decreases workers’ incentives and their means to make workplace changes. In ST, union activists explained that they faced similar difficulties when trying to convince migrant workers to join the union (notes, July 2017), and added that migrant workers’ youth undermined older workers’ demands. Whilst many older workers complained about the gruelling 12-hour shift alternating each week between day and night, younger workers appreciated the resulting higher wages (notes, July 2017). Najah explained,

I don’t like the 12-hour shift because it means that people have little time with their family. Only young people like it because of the overtime. Basic salary is 1,100 ringgit [250 euro] per month, but with overtime it can get to 1,600 to 1,800 ringgit.

EIEUSR had decided not to campaign for a return to 8-hour shifts, because, according to unionists, most workers wanted the extra income which overtime hours provided (notes, July, 2017). Ashraf, a union representative, explained, “People are OK, because they want to work more to earn more.” His response underlines the impact of younger and/or migrant workers whose demands contradict those of older workers, and the importance of a union’s ideology, since another answer to this issue could be to campaign to raise hourly wages instead of accepting overtime to have adequate wages.

This discussion shows that ST’s workforce is highly *fragmented* in terms of composition, identities, and rights, reflecting corporate strategies and the broader social dynamics in which the company was embedded. This diversity both supported and challenged workers’ ability to recognise common interests, articulate shared demands, and agree on tactics to pursue through their unions. I demonstrated that ST’s management drew upon and interacted with these various sources of identity to secure production and encourage workers to side with management instead of with their class or just to divide the workforces. In front-end sites, management strategies denigrated blue-collar traditions, modified wage patterns, and introduced greater competition between teams, to encourage individual approaches to work. In Malaysia, ST relied on migrant workers who had fewer rights than citizens – to the extent that ST governed female migrant workers’ reproductive freedom – to secure stable production. This fragmentation and its impacts expose the importance of widening the analysis of class politics to encompass workers’ socio-spatial positionalities, since, as noted by Wills (2008a), these positionalities informed the unions’ ability to create intra-union power locally, which I will show, shapes the unions’ capacity to create inter-union power locally *and* internationally.

Importantly, whilst I show that workers' positionalities *conditioned* unions' associational power, such conditioning is not intractable. Leitner et al. (2008, p.163) argue that socio-spatial positionality is "re-enacted on a daily basis, in ways that simultaneously reproduce and challenge positionalities." This opens the possibility for workers' to accept *or* transform such positionalities. Positions and identities are relational. They change through practice, negotiations and the exchange of ideas (Kelliher, 2017; Leitner et al., 2008). Williams (in Castree et al., 2004, p.235) explains, "[unions made] real what at first sight is the extraordinary claim that the defence and advancement of certain particular interests, *properly brought together* [emphasis added], are in fact the general interest." The very existence of a union is based on creating common interests, rather than assuming that they naturally emerge. The fact that French and Italian unions organised both blue- and white-collar workers or that women operators created unions in Malaysia and Morocco demonstrates unions' ability to challenge fragmentation and social assignation.

Workers, moreover, as we all do, change, and reassess their beliefs. Whilst he complained that engineers had undermined their strike in 2007, Rene said that after 2010 "there was a change." Then, during their strike "white-collars would congratulate us [saying], 'you're doing a good thing, you're defending your job.' [...]" When at the start, I remember that I would distribute flyers to engineers and they wouldn't take them, they would diss me." Daoud, despite criticising more radical union activities, joined the sit-in to contest the scrapping of the Ramadan break. When I visited, EIEUSR leaders were developing strategies to encourage migrant workers to join and to develop female workers' leadership (notes, July 2017) and throughout the thesis, I show that workers reworked some of these divisions to promote common demands. It is thus both crucial to understand that workers' positionalities condition workers' organising at a range of scale *and* that these divisions may be overcome through everyday practices and politics.

2. A fragmented labour movement

Above, I have shown that the unions choose different stances when it comes to organising operators and engineers or to supporting migrant workers. Here, I examine these differences in more depth to argue that differing ideologies underpin unions' cultures, which prompted unions to offer different answers to what ST workers' interests are; the tactics needed to further those interests; and whether unions should have a role in deciding corporate strategy. I analyse in more depth the differences between French unions,⁶⁶ which members of the TUN came to nickname the "French problem" and, more briefly, the three back-end unions' postures. Second, I show that each union's stance was shaped by its members' experiences of ST's strategies to undermine confrontational leaders. I argue that unions' varied stances, within the context of corporate tactics to harass and co-opt union leaders, challenged their ability and willingness to act together against management at a range of scale, creating a fragmented labour movement locally, and internationally.

a. Unions' ideology: values, roles and tactics

Several unions represent French ST workers. This situation stems from the history of the French labour movement and from national laws, which allow several unions to represent the same workforce. In France, seven labour confederations emerged during the twentieth century, each embracing a different ideology and organised differently at the local, sectorial and national level.⁶⁷ They have agreed and disagreed over countless national negotiations regarding pensions, labour laws and social security benefits. These stances act as a backdrop to workers' understanding of each union. For instance, in 2016 and 2017, when French confederations disagreed over whether to accept two waves of labour law reforms, the ability of ST unionists to work together locally was compromised. Whilst some workers attended the regular strikes to protect what they saw as all workers' rights, others did not take a public stance because their confederation supported the reforms or because, as individuals, they disagreed with striking (notes, January – May 2017). Workers noticed who stood on which side of the line. These tensions serve as a reminder that workers' and

⁶⁶ I do not look at the Italian unions, because the divisions they faced resembled the divisions between French unions, and because I have less in-depth data for them.

⁶⁷ Industry federations and local worker centres merged to form the CGT at the end of the 19th century, which was powered by a Marxist and syndicalist understanding of organising. By the 20th century, the CFTC, a Christian confederation emerged; the CFE-CGC, focussed on white-collar workers, formed in the 1930-40s. Post-1945, splinters within the CGT led to the creation of FO, and divisions within the CFTC, alongside the Mai 68 movement, to the CFDT. Concurrently, workers also formed autonomous unions, Sud and UNSA.

unions' local relationships are shaped by processes happening at other scales and by layers of history, relationships and politics.

National stances overlapped with decades of local nitty-gritty conflicts within ST. Interviewees suggested that the first disagreement was over *tactics* – discussion or direct action – to create leverage. Pierre, from the CFE-CGC⁶⁸ explained that although all unions shared the same goal “to defend workers as best as possible,” they “don’t have the same way to achieve this. [...] Often, the CGT enters more into conflicts, and we are seen to avoid conflicts. We have more of a discussion/negotiation [stance], aiming to strengthen [managements’ propositions] with our ideas.” Guillaume (CFDT) agreed, “the CFE functions a lot through back-door meetings [with management]. And, it maybe isn’t a conscious intention [to favour closed meetings], but just a consequence of an intention not to rock the boat. [...] The CGT represents more of an oppositional unionism, with traditional actions, such as petitions, rallies, strikes, walkouts.” Thibaut (CFE-CGC) concurred, noting, “the question is whether [one] helps management to implement [their propositions] or whether one stays in a place of criticism.” Samuel (CFDT) conveyed that their mode of action “is more negotiation. [...] We mobilise people, but we don’t organise actions. [...] The CFDT is more oriented towards no confrontation.” This measured stance was visible in the CFDT’s relationship to the media. For instance, Gauthier (CFDT) criticised actions which created too much media attention, fearing the loss of control this represented and preferring to be in “decision-making places”:

It’s hard to measure the consequences [of media actions]. Because we are in the same boat [as the company], so if you pierce the hull [...] whether the boat will sink or not, no one knows... [...] What is at stake is not to sink the boat, but to raise consciousness, to bring things forward. [...] The best leverage is to be in the places where decisions are made and to have a voice.

Unions’ tactical choices reflected each union’s understanding of leverage. Whilst the CGT, which represents mostly operators, emphasised the need for direct action to pressure management, the CFDT and CFE-CGC, with a larger membership of engineers, conceptualised their role as helping management implement its measures and, as Gauthier said, “moving things forward.” The expressions CFDT and CFE-CGC members used are loaded, implying by contrast that the CGT moves things backwards and voices idealistic criticisms.

⁶⁸ When introducing interviewees, I include their affiliations to ground their stances.

Second, unionists disagreed on *the definition* of workers' best interests. When workers' jobs are threatened, the decision about whether to resist or smooth the way for corporate plans does not just reflect tactical considerations, but also beliefs around whose interests the unions should defend. For instance, Rene (CGT) denounced the CFDT in Rousset for agreeing to a layoff plan, saying, "That's the difference between the CGT [and other unions]. We'll fight to keep the jobs, not to have better compensation [when made redundant]." Maurice (CGT) claimed,

There are some unions who concede much more, who accept layoffs and the closure of a site and they basically will accompany [workers to train for another job] and the closure. And others, which, by principle, will not accept that, like ours.

Unions disagreed, as well, about the meaning of equality, whether it meant levelling everyone's benefits down or bringing them up. For instance, Otto (CGT) criticised the CFDT, because they had "argued in favour of cancelling a break bonus for the night shift [...] in the name of uniformity [with other teams]." In interviews, I mentioned that the UMT had won the annual productivity bonus to equalised for all workers, whether operators or engineers. Unionists from the CGT expressed their envy towards this victory, which they had never managed to achieve in France (notes, March 2017). Claire (CFE-CGC) reacted,

We [CFE-CGC] defend equitable outcomes when they [CGT] defend egalitarian ones. [...] Equality for them is everyone receives the same annual bonus. If you do this everyone will have the same sum [...] for an operator who makes two times less than an engineer [that's a lot] [...]. But we don't do the same hours, [operators] work 32 hours per week, and I'm at least on 42 hours, if not more. You see, if you are paid more, it's because you are supposed to provide a service that's of greater value.

In distinguishing between equality and equity – and in noting that in other instances, for example concerning workers' contribution to insurance plans, the CGT defends equity and the CFE-CGC equality – Claire's remark shows the unions' disagreement over who deserves what. She claims that engineers create greater value, and thus that their larger bonuses are fair, in contrast with the CGT which claims that all workers create value and should be equally recognised. Whilst the values that emerged from these interviews reflect unions' efforts to speak to their membership, they also symbolise the different political visions that unions hold regarding the very question of what constitutes a union's role. These differences illustrate the varied ways of doing union work and the importance of politics to understand these differences.

Third, the unions choose various *stances* within the spectrum of promoting workers' interests versus the company's ability to direct its profits as it pleases. Whilst the

CGT argued for “ambitious” demands regarding pay rises, job retention or bonuses, Claire exposed the CFE-CGC’s position: “We see the results of the company, the difficulties that there may be, we aren’t going to ask for a wage increase of 10%. The important thing is that the company does well, that it can invest.” By contrast, the CGT and the CFDT reframed and politicised this trade-off, suggesting that it was rather between workers’ wages and capital investment on the one hand, and financial returns to shareholders and senior managers on the other (CFDT, 2015b; CGT, 2018e, 2019a). This was quite an informed critique, where unions suggest that they care about the business. Damien remembered, from his corporate post, that all French ST unions were attuned to ST’s business needs,

[French] unions [including the CGT] weren’t Martinez-style.⁶⁹ I’m not going to say collusion, but they had this incredible intelligence to understand the stakes. [...] There was a really deep understanding of the business. [...] When ST played well [made money], [unions] would annoy us [for greater compensation] and when [ST] played poorly, [unions] would still tell us [to protect the company].

This attunement came about in part, according to Damien, because when he worked for ST, he showed union leaders what he showed senior managers, because he “thought it was perfectly logical to give them data. [...] When you give people a minimum of information on the environment and you tell them you have issues, they understand why!” I hold that this forms another type of *interpellation technique*: by giving them information, management encourages unions to internalise a managerial outlook. This interpellation is effective, I argue, because, in sharing such information, the former management team *recognised* union members as actors who can understand strategic considerations. Having been recognised as such, union leaders might be more understanding of corporate needs but also believe themselves able to evaluate ST’s strategies. Rathzel et al. (2014, p.214) note that “trade union work requires an imaginary position of company manager, albeit managing the company from the standpoint of workers.” Several union leaders I spoke to embraced this alternative manager position, emphasising that they had joined the union *to improve* ST’s functioning (notes, May 2017). I return to this stance in Chapter 8, showing that it enabled French unions to find common ground. The divergences in unions’ tactics, the types of demands they promoted, and their stance towards management, illustrate the different politics held across the CGT, CFDT and CFE-CGC. Such disagreements strained collaboration between union members locally.

⁶⁹ Martinez is the leader of the CGT confederation. He comes from the metalwork federation and puts forward a class-based militant vision for the CGT.

Whilst relations in Tours and Grenoble were sometimes collaborative, in Crolles and Rousset, relationships between the three unions were riven by accusations of collusion and betrayal (notes, January-May 2017). In Crolles, Alban (CFDT) explained, “We have a very difficult past with the CGT, so we are quite divided,” and CGT leaders echoed this feeling. One point of contention was a strike in 2015, when the CGT members felt that the CFDT used their mobilisation to negotiate, *without them*, and only turned up for the cameras (see Chapter 4). In Rousset, amongst many grievances, David remembered, “[in 2010], the CFE-CGC had organised a counter-rally against workers who were striking!” Given these antagonisms, Jules argued that the “peak of collaboration” was in May 2016, when representatives from the three unions gathered together in front of the Ministry of the Economy, because ordinarily, Otto claimed, “in some sites, it’s almost physically that union conflicts resolve themselves” (notes, October 2016). Whilst unionists rationalised their division, they also acknowledged that it undermined their power, recognising that speaking in one voice, by contrast, strengthened their position. Maurice (CGT) explained, “We say that we should try, each time we can, to act together [...] when in terms of workers, it’s worth it [...] and we try not to just account for the past [conflicts].” In 2017, all three unions agreed on a common national declaration, and this had constituted a real challenge to management. Guillaume recalled,

The declaration had barely started. [I was] just saying the first sentence, just saying that this was a declaration of all the unions around the table and there, straight away, management interrupted, ‘Excuse me, you said, all the unions?’ [I said yes]. And they changed colour. They weren’t happy.

For this reason, leaders across the CFE-CGC, CFDT and CGT tried to agree on some issues. Nevertheless, they recognised that this approach created difficult conversations within their branches, as activists’ resentment towards one another sometimes overshadowed the national picture (notes, March 2017).

Regarding back-end unions, my limited interactions with unionists suggest that GWU in ST focussed on putting forward reasonable requests and cooperation. For instance, Liam exclaimed they were effectively allied with management: “I don’t understand why unions and managers are opposite, we’re on the same side. If workers’ aren’t happy, the production will not be good.” The labour-management relationship in Malta is based on the triannual negotiation of the CBA, which mainly feature sit-down meetings and argument-by-argument discussion. Christopher, GWU’s federal leader explained, “We try to avoid [strikes] as much as possible

because when you are doing things like that you are losing money.” The last strike was in 2015: workers walked out for two hours in a dispute for a pay increase of 5% – they accepted 1%. Despite this success, Liam argued that strikes were not the solution to labour conflicts but that workers should focus on upskilling instead. This “reasonableness” was also apparent in their privileging of the national scale for negotiations. When considering whether to join the first TUN meeting, Liam insisted, “I don’t want to talk about salaries at the international level. Those are questions which we deal with on the local level. I agree to talk about working conditions but not salaries” (notes, July 2016). After an EWC gathering in Paris when French and Italian unionists broached the subject of asking for better wages at the international level, he sent me comments on WhatsApp outlining his worries. He reminded me that they went through a large restructuring plan in Malta not long before and felt that his union knew how to negotiate with local management and feared that external interference would destabilise the equilibrium which enables the Maltese plant to survive (notes, November 2017). GWU leaders’ interests in international collaboration was thus seemingly caught between their need to protect their relationship with local management in the wake of ST’s offshoring threats – demonstrating why each site’s relationship to ST’s GPN matters – and the fact that the GWU had also gained from learning about what happened elsewhere in Europe through the EWC (notes, July 2018). This duality persisted during the TUN: GWU never pushed for common demands or taking action, however they also steadily participated in the TUN’s conversations.

EIEUSR’s tactics were limited by the lack of labour protections and the current labour context.⁷⁰ Their leverage seemed to rely on management’s interest in industrial peace. For instance, when the worksite committee prepared the CBA negotiation, I asked Imran, “What do you do if management refuse your point?” He replied, “If we are faced with management and there is a point of disagreement, I advise we move on and then come back to it later.” In my notes, I reflected, “they have very limited means of pressure, they’re not legally entitled to strike... It seems like they feel that workers’ problems will resolve themselves based on the company’s goodwill” (July 2017). Akmal, explained that they conceded to

⁷⁰ Only 9% of Malaysian workers are unionised (Ganesan, 2016 p.93); employers continue to use a range of anti-labour tactics (R. C. Rose et al., 2011); strikes are banned de-facto (Wad, 1997); and motivation for unionisation is “traditionally service driven” (Kumar et al., 2013, p.33) rather than movement-based.

EIEUSR's demands to a certain extent, to shore up the union's credibility with workers, finding that having EIEUSR as workers' sole representative was helpful:

The company treats the union as a partner, as part of the family. Because the union knows how much the company can give, it doesn't ask for too much. [Their] demands are reasonable and the company knows that [engaging with the union] is part of the process [of managing the workforce].

EIEUSR limited itself to reasonable requests, whether acquiescing on the issue of migrant workers' rights or once closing down a petition that workers had self-organised, on the basis that its demands were not feasible (notes, July 2017). The union's president, Afiq, explained, "The relations with management aren't bad, the only thing is that we received pressure to [not] participate in the TUN's activity. We don't have the same culture here, we don't function [like unions in other ST sites]." Afiq's answer highlights the risk that unionists took when participating in the TUN's activities, but similarly to Liam above, stressed the value of a localised remit for labour-management relations. Unions' acceptance of this remit, whether in Malaysia or Malta, undermines the case for international solidarity, since they suggest that they do not need (or want) other unions to get involved in matters which the unions held only concerned local labour-management relationships.

By contrast, the Moroccan union leaders were more militant, though they articulated their role as "protecting the company *and* protecting workers and their dignity" (Mehdi, emphasis added).⁷¹ When activists created UMT, Mehdi explained,

Worldwide managers were surprised by our flyers, [because] there were pictures and names of people who had responsibilities. They wondered why people who don't have issues with their jobs [or] salary or people who have links with HR [are forming a union]. We outlined a lot of problems with management, organisation, production and quality, thefts or underhanded deals. [...] The [worldwide manager] confirmed everything we said, [...] and we continued to speak.

His quote indicates that UMT, whilst increasing workers' rights, also acted as a conduit to express workers' suggestions for improving the company. Leaders explained that they pushed workers to increase the company's profitability and evaluated the costs and benefits of each suggestion in respect to its benefit for both workers and the company (notes, February 2019). Azzaddine noted,

The message that the union gives the workers is that we are going to improve our rights but also [business] indicators and quality. You have

⁷¹ Whilst I quote Mehdi, the 18 workers I interviewed in Morocco all echoed this view.

to work more, we can't ask for more and have low [performance] indicators. [...] You ask and you work!

Belaid added, "There are our rights and those of the company" and the union defends both because, "We're a developing country, we always need to maintain a good image and reputation so that investors continue to invest in Morocco. The union can't create problems that will make investors run away." This responsible position shaped the union's militancy. For example, once, the UMT had organised a strike in the factory which they finished at 4 pm so the production lines would be ready for the visit of an important client the next day, demonstrating that the UMT understood ST's needs (notes, January 2017).

Yet, when UMT leaders embodied this position during the TUN meeting in February 2019, one Italian leader remarked, "UMT representatives aren't workers, but supervisors" and later that day, smirked, "Do you think this [pushing workers to improve local productivity] is union work?" (notes, February 2019). He questioned whether his union stood on the same side as the Moroccan one. I found this reaction somewhat hypocritical since all unions performed – with more or less emphasis – a discourse presenting unions as attentive to the company's needs. In addition, despite their loyalty to their site, Moroccan union leaders were also proactively internationalist. Mehdi explained, "[Managers], in negotiations, would speak of changes, closures, transfer of the site, but because [they saw] it didn't have an influence on us, they stopped." They believed in the possibility of learning from other unions to improve local conditions. Azzeddine argued, "One could take competition in a positive way, that we have to improve. For example, Shenzhen have no accidents and we have four, that's not normal." Workers saw increased international collaboration as a source of greater negotiating strength with ST. Massoud believed, "It's beneficial to have communication between sites and support each other when there is a problem," whilst Hosni argued, "already local solidarity is strength, so an international union, that would be a strong organisation." and because "if [troubles] threaten Malaysia today, tomorrow they're here...!"

The UMT's strong interest in international exchanges contrasts with the Maltese and Malaysian unions' stance. This difference, I believe, stemmed from their sense of being less vulnerable, and their politicised understanding of solidarity, based on their experience of gaining rights and dignity at work following the creation of the UMT. This was a considered solidarity, as the UMT also worked to protect Bouskoura's business by engaging in labour productivity bargains. Unlike the Italian representative, I do not feel able to judge the UMT's decision to participate in

increasing workers' productivity, the GWU's suspicion of external propositions and the EIEUSR's moderation. The UMT represents 85% of Bouskoura's workers and all interviewees were genuinely proud of and grateful for the union; ST Kirkop workers voted for GWU and Muar workers for EIEUSR. I do not have to negotiate for thousands of workers and weigh their demands against a site's survival, in a situation where back-end sites are more vulnerable than front-end sites to relocation. As Wills (2001, p.485) simply put it, "workplace trade unionism is dependent upon the viability of any plant or operation." As such, when unions mandated to represent specific workers consent to whipsawing, they may be making a sensible decision to keep specifically located jobs in the long run. Significantly, the Italian leader's questioning reveals how precarious the trust between the unions was, and how unions' values shaped how they fought for workers' rights and how they collaborated locally and internationally.

In this section, I highlighted unions' differing stances towards management and analysed some of TUN participants' values and their local labour-management relationships. Such differences mattered locally in France, as they weakened unions' negotiating power, since workers joined different unions, believed in different goals and tactics, and were seldom able to agree. In the three back-end sites, unions adopted mostly measured stances towards management and, in Morocco, emphasised labour productivity bargains, which surprised European union leaders and somewhat challenged their trust in each other (see also Chapter 9). This illustrates why attending to unions' stances and ideologies matters for understanding their ability to build trust at the international level, and from there, collaboration. Ellem (2004) outlines how it is often the global player, the TNC, which pushes for a local-centred outlook, since it enables it to fragment workers' power and whipsaw one site against the other. My observations and interviews suggest that the interviewees had, to varying degrees, internalised this limited remit and resulting loyalty to their sites and management, a stance which informed unions' desire for and fear of increased international collaboration. Finally, I showed that these unions, whilst they disagreed on tactics and what extent to push management, all cared about ST's business. In Chapter 8, I show how this alternative management stance provided the basis for unions to recognise a shared interest in fighting for an industrial future for ST.

b. Varied treatment

Whilst union stances were shaped by their values, they were also informed by the unequal treatment of each union *and* their members. In France, unions' authority to negotiate collective agreements is based on triannual workplace election results: only unions which receive over 30% of workers' vote⁷² can sign binding collective agreements with the employer. In ST, no single union holds an absolute majority. As a result, management holds an interest in undermining more confrontational unions and in strengthening more moderate ones so they can sign agreements in their favour. Interviewees mentioned a number of ways in which ST tried to achieve this: engineering the transfer of unionists from one site to another to jump-start a specific union; granting access to production rooms to some activists during election; and creating unions from scratch. One worker said, "Here, [a union] was practically created by management." Workers recognised that these practices had the ulterior motive of undermining militant unions. Moreover, in some places management held close relationships with federal representatives, who would curb members that they (and management) viewed as too radical. Rene remembered, once,

[When] we entered into a conflict [with ST], [the federal union structure] came and said, 'Stop everything. We don't do such mobilisations.' [...] They took away the mandate from all the shop-floor representatives!

The HR representatives also introduced alternative channels of negotiation, whether negotiating behind closed doors *with specific unions* or encouraging alternative discussion spaces, where each opinion was treated the same whether a worker represented anyone or not. One interviewee mentioned seeing representatives from another union walking into the negotiating room with HR representatives, because both had met in advance to prepare the negotiation together. Another recounted having found a script left next to a photocopier, which outlined point by point what another union should say during a negotiation and which points the HR would concede (notes, May 2017). Workers also noticed,

At the moment, the tendency is not to negotiate with the unions, but to create 'working groups.' [...] They explain to people afterwards, no need for work councils.⁷³ [...] They create groups where they select participants on a voluntary basis [...] mixing representatives, workers, a bit of everything. [...] Stuff like that kills unionism. (Leo)

⁷² Further, an agreement cannot be opposed by unions representing over 50% of workers.

⁷³ Legal instances at the company level where company and union representatives meet to discuss CBAs, wage increases, safety and security or pay gap.

Participants in these working groups discuss workplace issues; however, they are not accountable to other workers, holding no mandate. Maurice stressed the pro-management approach that the self-selection of participants enabled, as “[in the groups], you have people in front of you who were chosen by management, [...] when you [as a union] are trying to bring forward ideas that are really collective positions because you worked on them.” These situations, under the pretence of everyone having a voice, create a false sense of equality and sense of workers’ being heard, but they deny the imbalance of power that exists between workers and their employer and, as such, deny the need for workers to create *leverage* through unions for their demands to be heard, negotiated and implemented.

Not only were union structures treated differently, but also, according to interviewees, so were their members. Prior to getting involved in his (less confrontational) union, Gauthier asked management, “What would happen to me if I presented myself on a union list [...] [Management] gave me permission, saying it was O.K. [i.e., it wouldn’t impact his career].” Presumably, a worker joining a more militant union would get a different message. The differences could also be more subtle, and yet, highly symbolic. Louis explained that he felt as if representatives from other unions “speak with the HR, like you and me are speaking. They [use the informal you], they see each other regularly... They just have totally different relationships. [...] [and this is followed] by promotions and pay raises.” Informality illustrates HR managers’ attempt to focus on inter-personal links and deny the structural imbalances between workers and themselves, as representatives of the corporation. I saw similar tactics at play elsewhere. For instance, in Muar, throughout my stay, I witnessed several moments when EIEUSR representatives shared social spaces with senior HR managers. This cosiness was confirmed by Harith, who explained,

We have more than a professional relationship with the worksite committee. We invite each other to [religious] functions and to each other’s homes. Now, we also highlight the fact that there is a union to potential clients, and offer space during the initial training days to [the union] to tell workers [about their work].

During my first weekend in Muar, a union leader took me to the HR’s son’s wedding. Later that evening, we attended the Hari Raya open house – a traditional Malay Muslim feast celebrating the end of Ramadan – organised by another HR manager (notes, July 2017). When I pressed about the evident closeness, the union president retorted, “I don’t understand this hierarchy [between workers and bosses], it is not good. [Setting up this hierarchy] is like the caste system in India!” He went on, “The

company pays me, how can I fight them?” (notes, July 2017). In his contradictory reaction, he reveals a refusal to see an imbalance of power between himself and company representatives, and at the same time, his dependence on ST. Several union members reproached him for his closeness with management, and in February 2019, suspicions along these lines led the worksite committee to send another representative to the TUN meeting (notes, February 2019). Whilst not in itself a major incident, their choice to switch representatives reflects the ways in which trust amongst union leaders was fragile, as well as managers’ power to bend union leaders towards holding greater loyalty to them rather than to their union colleagues.

Besides favouritism, personal relationships, or alternative channels for workers’ expression, discrimination has a sharper edge. Alban argued, “Once, we did an assembly, and [those who came out] were directly called in for an individual interview. [Managers] had watched the security cameras.” Leaders, who were seen as too confrontational, faced repression, and, according to workers, were sometimes bought off. Laura once emailed other workers to assess possible gender-based pay and promotion imbalances. Despite having bcc-ed workers, she “got an email from HR saying she had used a company tool [email] for personal reasons and [...] that they could fire her for this.” She called their bluff but also noted that it symbolised the pressures that CGT union leaders faced, and the legitimate fears workers might have when speaking with them. Louis faced intense pressure after standing for the CGT. In his words,

They made sure I understood I had made the wrong choice and that I was going to suffer for it. [...] I didn’t have any promotion or training at all. [...] My colleagues were told not to speak to me, [...] I had a manager monitor my daily movements, hour by hour, minute by minute, to try to show that I didn’t do a good job. [...] There was a false accusation that I had torn down a poster.

Elsewhere, Jo, a CGT leader, explained, “[I had] a pay rise of 0% for five years, I had to do an individual development plan for two years. [...] Another [union leader] faced pressure, a story of a [work]badge that had turned up in a secure zone. He faced cops knocking on his door one morning.” Many unionists reported career freezes, which were lifted only after they threatened to bring ST to court. When they did, ST gave in prior to the trial: they compensated the claimants, avoiding any legal judgement, and thus no proof of discrimination was made public.

The matter of *public-ness*, I argue, was crucial. The quotes I present are somewhat opaque and this is the *very thing that matters*. Constrained from speaking out, union

leaders were not able to prove their suspicions to workers. As a result, interviewees reported stories which circulated as rumours and as hearsay, these rumours worked to decrease trust between workers, to delegitimise unions and to increase division between union activists. They were stories on the one hand, of management bribing some union leaders or militant workers, and on the other hand, of more militant activists facing ongoing discrimination at work. On the former issue, namely bribery, Maurice observed that other unionists “are favoured with loads of rights we don’t have. And worse things which I won’t mention, because I need to be careful with what I say.” This speaks to his fear of his words being reported, and without proof to back him up, potentially getting him into trouble. In another interview, Rene said,

I was witness to a discussion with [the HR assistant], who offered a post in [union name] to a worker. [The worker] said, ‘No, [...] I don’t really want to.’ [The HR] answered, ‘But don’t you want to have a career?’ And that says it all...

In this instance, management promised a worker career advancements if they joined a union which would support management’s goals. He added that, “in exchange” for receiving favours, when management needed them, workers would do what management asked, and, “That’s how you get some people who sue other workers...” The cryptic last sentence referred to a story, mentioned by several workers, involving one union leader who was accused by a worker of pushing a pregnant worker and causing a miscarriage. He faced two years of trials and was only cleared when he proved that he was not there when the incident was said to have taken place (notes, January 2016). In burnout, he left the company, activists suspected, also with a comfortable sum (notes, January 2016). In Crolles, Otto said that, following a strike, ST bought off leaders and separated them,

All the leaders in the night team [...] were divided [between teams] and at some point [managers] negotiated [a ‘leaving gift’ for strike leaders]... then after [such ‘gifts’] it’s hard to mobilise people, because they see how it goes. [...] Since [ST] isn’t condemned, they continue.

In addition to decreasing workers’ trust in union leaders, he explained that stories of corruption and corporate reprisals were hard to share, because these stories could discourage workers from joining unions if they suspected the level of reprisal from ST that union membership – in the wrong union – entailed (notes, March 2017). Otto added that if they spoke about how ST bought off workers – and rumours already circulated about this, other workers would come to feel unionists organised actions just to increase the “leaving gift” they would receive from ST and this would tarnish the reputation of all unions.

Management's harassment of some union leaders did not stop in France. In Italy, all interviewees reported seeing their career advancements stop once they joined a union. In Morocco, Mehdi explained,

Each year I make an official demand to have a career progression [...] but they still don't want to give it to me. [...] A few years ago, they also tried to get rid of me by spreading rumours, according to which I had stolen money, created issues. [...] During the Arab spring, [I took part in the protests]. They sent my picture to global management saying I was dangerous.

Management throughout the world uses tactics that encourage workers to take part in so-called good unions, which gain company favours in exchange for acting to cool off workers' frustrations (Giraud, 2013; Hauf, 2017). Beyond the ongoing difficulty of facing harassment on an individual level, what is particularly powerful here is that this repression was uneven across and within sites and, as a result, it divided unions, since *not all unions and not all union leaders* were discriminated against. Furthermore, there was no proof of favouritism or its opposite, to provide workers and unionists with a recognised set of fact. This uncertainty manufactured mistrust and, I argue, undermined unions' associational power, both regarding workers' trust in the union and unionists' trust in each other.

Across this section, I showed the variety of union cultures throughout ST and the difficulty this created in terms of building trust, and from there inter-union power at the local and international level. I could have written this section only emphasising unions' differences that come as the result of corporate tactics, such as discrimination, favouritism, whipsawing, rumours and interpellation. Yet, such a focus somewhat negates unionists' own considered choices. Maurice noted, "To be honest [intra-union division] isn't just organised by the company. There is an influence of the company, but also, of certain unions that don't share the same vision." Whilst it is easy to criticise management's attempts to undermine militant unions, it is important to recognise unions' decisions to uphold measured stances. Rathzel et al. (2014, p.72) argue that attention to workers' subjectivity might "allow us to see where resistance to subordination might be subdued and diverted, not only by authorities but also through the ideas and practices of the subordinated themselves" (see also Jenkins, 2013). How union leaders conceptualised their roles exposes their constrained "stances," as based on their position in ST's GPN, the corporate tactics they faced and their chosen ideologies, which, whilst not always answering "class" hopes, remain important to acknowledge, for they are examples of choice and because, crucially, they affect inter-union power at a range of scale.

Conclusion

In contrast with site-based stories of workers (Birelma, 2018; Rathzel et al., 2014; Wills, 2008a) and despite labour geographers' call for understanding labour as a social category with multiple internal divisions (Cumbers et al, 2008; Herod 2003a), studies of international labour campaigns often fail to tell their readers *who* the workers are, what are the various corporate tactics they face, and what they believe in and fight for (Brookes, 2013a; Castree, 2000a; Hennebert, 2010; McCallum, 2013). Newsome et al. (2015, p.10) further critique Coe and Jordhus-Lier's (2011) for failing to analyse "important contexts and factors including the type, nature and structure of union(s) involved, [...] the degree of managerial acceptance and opposition, [and] employer's strategies and orientations." Here, I answered these remarks, by analysing workers' socio-spatial positionalities. I showed that workers' capacity to act in solidarity within one another crossed over a multiplicity of registers and how their positionalities shaped their experiences and organising cultures, sustaining and challenging unions' intra-union power. I claim that these local challenges are crucial to understand unions' broader ability to work at the international level: if unions cannot motivate workers locally, moving them for international goals will be even more difficult.

I also provided this more in-depth analysis concerning unions' stances. I showed that some unions in ST held closer relationships than others with local management, whilst others were more confrontational in their demands and tactics. Cumbers et al. (2008, p.373) proclaim that "internally, too, unions are not monolithic entities but instead are themselves the site of class struggle, composed of multiple positionalities in relation to capital." These varied stances challenged unions' ability to build inter-union power at the local, national and international level. In France, unions disagreed over tactics, values and demands. This divided their power locally and meant that inter-union collaboration was difficult to achieve locally and nationally, and, I show in Chapter 9, internationally. At other sites, unions were wary of broadening the scope of their discussion to include unions located elsewhere because of ST's offshoring threats and because of their close relationships to management. Varied cultures challenged the trust leaders held in each other but also their willingness to collaborate with other union leaders. Lastly, I argued that an alternative management posture ran through all unions, a stance I return to in Chapter 7, showing that this was a common ground on which unions could collaborate.

Beyond describing these differences, I showed that workers themselves reproduced workplace divisions, whether regarding professional category or legal status and emphasised that these choices are framed by corporate manoeuvres. I argued that ST unions were divided, not just because they represent different categories of workers in different places and by corporate tactics, but also, and crucially, by *how* they *choose* to represent workers and what they deem a union's role to be. I claimed that unions' values reflect their constrained agency, in that each stance is shaped by management's coercion, discrimination and favouritism, but also by unions' own choice to see conflict (or not) between themselves and management.

Acknowledging workers' complex if not "messy" affiliations (Katz, 2006; Wills, 2008), whether in terms of experiences, tactics or values, means I often felt trapped in description. I dealt with people, and I railed against the "human factor" and my inability to theorise beyond it. I took comfort in Katz's (1998; 2006) claim that the very desire to abstract from experiences is the issue, as the recognition of complexity is key to fighting against the multiple strains of what makes our world unequal. Yet, I found myself sometimes banging my head against the platitude of understanding the world as suffused only with difference, since it has always been, and yet workers have often, with all their complexities, struggled to make it less unequal. I share Mitchell's (2016) critique of the counter-revolutionary tendency of acknowledging the world only as *it is*, rather than as one constantly transformed by churning dynamics and conflicts. Here, I have argued that first, these differences and divisions should be understood as powerful in how they *divide* workers and challenge their ability to create inter- and intra-union power at a range of scales. Second, some of these differences should be understood as reproduced on an everyday basis and through different scaled systems of power, be they political systems (such as migratory labour regimes), social discourses (for example regarding white-collar workers' interests), and corporate practices of division, repression and spreading rumours. This dynamic aspect, I believe, opens possibilities for change and resistance. Third, the emphasis on workers' varied socio-spatial positionality should be complemented with an attention to unions' varied ideologies to better understand "who" each union is, and, from there, evaluate how unions can *negotiate* the challenge of collaboration, even as these negotiations are riddled with people's complex affiliations. To avoid this analysis would be to understand class as a reaction to workers' contexts rather than as a process, and erase workers' and unions' (constrained) agency in choosing whether or not to confront local management structures.

Interlude 2:

Malta

‘ST used to be Malta’s best company,’ sighs John, a technician. Another technician next to me adds: ‘We were third globally, we invented Nintendo, the Wii. Now ... no one knows us.’ (notes, June 2018).



ST Kirkop Fab (source Xuereb, 2012)

Malta is a small arid island, whose white buildings in the old (and tourist-filled) Valetta quarter sparkle over the blue of the Mediterranean sea. It is congested and sprawling. There is a lot of tourism and increasingly, I learn, income from online gambling – workers walk in and out of buildings groomed for online broadcasting. The economy boasts of growth rates that would make its European neighbours salivate – 5.2% was projected for 2019 and 6.4% for 2020 (Times of Malta, 2019), but despite the growth rate, it remains a poor country.

ST Malta was established in 1981 with an initial workforce of 25. By 1982, there were 400 workers, Christopher tells me. By 2005, ST employed 2,300 people and had three plants (Zammit, 2005, p.259). It was the largest private employer in Malta, and the largest exporter, representing 55% of the country's total domestic exports (ST, 2004). In 2014, ST still represented 47% of Malta's exports (excluding fuels) (MacDonald, 2015). The company now barely employs 1,600 workers, has closed down two of its sites, struggles to keep new workers, and no longer offers the recognition that workers feel they deserve, neither in terms of prestige nor wages (notes, June 2018). For Christopher, a former union representative, the turning point came between 2008 and 2010, when

[There were] three major issues. One was [that] unemployment was going up very high, [second], electricity and water tariffs were going sky high, [because] there was the oil crisis, and electricity bills almost tripled. [...] [And third] the collective bargaining agreement (CBA) had just lapsed and we had to negotiate the new agreement. [...] [ST] were threatening that they would leave the island, [and put] a lot of pressure on the authorities, [saying] 'Don't increase the wages, the utilities or we leave.'

ST reported facing a 60% increase in expenses due to higher water and electricity costs⁷⁴ and threatened to offshore its activities (Stagno-Navarra, 2010). According to Liam, "The HR manager seemed genuinely scared that the site was going to close." This menace loomed over the negotiation of the new CBA and over state representatives who considered offering "concessions" to ST "to keep its operations in Malta" (Stagno-Navarra, 2010). A Maltese academic explained, "ST is the main exporter for Malta [...] with many small subcontractors being dependent on ST, so they have a lot of leverage over Malta." The coordinated pressure was successful. According to Aaron, the Maltese government "fork[ed] out 48 million euros" as a subsidy to develop advanced packaging processes to ensure that ST stayed.⁷⁵ In addition, ST pressured the union to change the CBA. At first, workers resisted and organised strikes: there was two years of turmoil, strike, action, whatever" (Aaron). Liam explained,

We told the men [sic] not to say yes to the changes [of the CBA], [...] [however] there was a lot of pressure. [...] We had internal meetings at work [and], at town hall meetings [ST and politicians told us], 'If

⁷⁴ Malta relies on fuel imports, and is thus highly vulnerable to energy price fluctuations. ST's factory consumes as much as the island of Gozo, home to 37,000 people (Xuereb, 2012).

⁷⁵ The Maltese government budget in 2010 was projected at 2.9 billion euros; 48 million euros thus represents 1.7% of the annual government budget (Malta Finance Ministry, 2009)

you are not going to accept [the agreement], the company is going to leave.' [...] There were news articles that ST was going to leave Malta if workers didn't accept the new agreement.

Because of the town hall meetings, media pressure which portrayed the country as “on the verge of losing the biggest employer” because of GWU (Aaron), individual meetings with unionists and government pressure, the union signed the new CBA, renouncing one wage rise, and introducing a lower wage for newcomers. According to Liam, this “was the worst thing.” It established a two-tier wage system for existing workers and newcomers. Since signing this CBA, the site has lost 1000 workers through “natural wastage [...] people [left] on their own and were not replaced” (Aaron).

Yet, when I visited in 2017, prospects seemed brighter, if not at ST, but in the rest of Malta. Increasingly, workers realise, “effectively, they can leave their jobs and start another job the following day, especially if they have a technical background” (Aaron). Christopher explained, “Now all employers want to sign [new] CBAs because they want to increase workers’ entry wages,” to attract the workers they need but cannot find. In ST, there was a gap in the pyramid of workers’ ages, because entry-level operators, moved to different companies once they had received training, whilst older workers stayed, having reached peak levels of pay. The HR representative was now eager to revisit the CBA to correct entry-level wages whereas they had implemented an entry-level wage freeze for the previous eight years despite the union’s warning of this leading to a recruitment problem (notes, June 2018). The situation shows the importance of local labour-market dynamics in shaping unions’ ability to negotiate (Coe, 2000; Coe and Kelly, 2000), and illustrates the cordial labour-management relations in Malta. When Christopher explained that they were addressing the entry wage issue *now that HR were wanting to negotiate around it*, I thought, ‘Why haven’t you been pushing for this before?’ At the same time, I recognised that the story of the Kirkop site features an instance of a coercive whipsaw strategy in which the company used “explicit or specific threats” (Greer and Haupmeir, 2016, p.30) to its advantage, asking unions (and the state) to help secure the site’s profitability. The union decided to heed the pressure, and perhaps rightly so.

Chapter 7:

A company in financialised times

Financialisation has led to a new regime of production, which, in a feedback loop with increasing international outsourcing and integration, as well as neoliberal measures, has prompted a significant reduction in workers' power and income (Crotty, 2008; Krippner, 2005; Silver, 2003). Whilst this much is well documented, the impacts of financialisation on workers' everyday experiences "remain under-specified" (Cushen, 2013, p.315). In this Chapter, I first present the literature on financialisation at the corporate level and outline workplace-level changes which scholars associate with a focus on maximising shareholder value. I then show that financial pressures have gained increased precedence in the semiconductor sector and argue that this situation exacerbates the pressures of scale faced by ST.

I then analyse whether ST's corporate choices themselves reflect a growing emphasis on delivering shareholder value, considering ST's allocation of income, the messaging from the senior management team, and workers' changing workplace experiences. I argue that ST's allocation of income and its internal strategies, especially between 2006 and 2016, reveal a focus on cost cutting in order to report desired financial ratios, and on extracting value to provide attractive dividends. Workers faced increased insecurity and stress along with increased alienation from their labour. I conclude by arguing that workers recognised all of the changes mentioned above as consequences of financialisation, and powerfully discredited these shifts as harmful to ST's future, suggesting, at the same time, an alternative vision of what ST's future could be. Doing so, I aim to further the understanding of how workers experience and resist financialisation, but also to set the basis of what brought them together to campaign against it.

1. Corporate financialisation

Here, I summarise the literature, which has tracked the meso-level impacts of the shift towards maximising shareholder value and review the workplace changes which authors associate with corporate-level financialisation. I then argue that the financialisation of the semiconductor industry increases pressures of scale on mid-size companies, such as ST. This has led some companies to choose a fabless strategy whilst others have decided to comply with the demands of Moore's Law and upgrade their industrial capacity, a context which, I show, further increases the pressures of competition faced by ST.

a. 'What the market wants?'

Milberg and Winkler (2010, p.276) argue that in the 1980s,

corporate strategies began to shift, focusing more on the maximisation of shareholder value and less on long-term growth. The transformation involved [...] an increased offering of financial services, an increase in the purchase of financial assets and [stock buy-backs].

The competitive nature of capitalist development has ensured that the focus on maximising shareholder value outlined by Milberg and Winkler (2010) has seeped progressively from financial firms to most firms followed by analysts, which are thus in turn "financialising" (Chambost, 2013; Fligstein and Shin, 2007; Aalbers, 2019). Maximising shareholder value, expressed as profit and share price, is both a set of ideas and a set of strategies favoured by financial markets to put these ideas in practice. These strategies have led, across sectors, to firms' economic performances being increasingly benchmarked against their competitors', based on standardised ratios which compare costs, revenue and investments rather than productive measures, such as market share, operational investments or long-term growth (Bachet and Compin, 2013; Baud and Durand, 2012; Fligstein and Shin, 2007; Froud et al., 2014; Levesque and Murray, 2010; Sauviat, 2003). Other strategies include mergers and acquisitions because these often lead to large windfalls for investors; cost-cutting measures which secure expected ratios; decreasing capital investment; restructuring and downsizing the labour force; outsourcing activities to suggest that the company is focussing on "core business"; share buybacks; and distributing dividends (Aalbers, 2015; Fligstein and Shin, 2007; Froud et al., 2000; Sauviat, 2003) – **Figure 7.1** summarises these phenomena.

Froud et al. (2000) argue that these strategies lead companies to change how they allocate value but also are geared to performing “what the market wants.” Aalbers (2015, p.217) observes that “many senior managers [have] become busier with communicating positive stories to appease credit rating agencies, market watchers, and stockholders than with innovation or production gains.” Financialisation, these authors thus suggest, is about implementing specific strategies, but also narrating them. Senior management needs to construct optimistic narratives to convince the financial market – whether this public is real or imagined through the dull compulsion of the market matters not – that the chosen strategies will raise shareholders’ profits (Cushen, 2013). Yet, according to Fligstein and Shin (2007), the preferred, often formulaic, strategies which may raise short-term profits may also threaten companies’ long-term profits by decreasing R&D and long-term investment and nonfinancial innovation (see also Aalbers, 2015; Christopherson et al., 2013; Stockhammer, 2004). As I will show, workers throughout their interviews criticised financialisation based on these long-term considerations.

| Strategy | Justification | Practices |
|----------------------------|---|---|
| Restructuring | To focus on “core competence” and achieve expected performance ratios | Mergers and acquisitions |
| | | Outsourcing |
| Securing shareholder value | To ensure that companies provide good financial ratios, which secure shareholders' investments and revenues | Increasing dividends and share buybacks at the expense of investments |
| | | Decreasing capital investments |

Figure 7.1: Strategies, justification and practices of firms following shareholder value pressure.

Whilst a number of studies outline macro-level consequences, including the pressures on wages, rising income inequality and increased job losses (Aalbers, 2015; Sauviat, 2003), the literature examining how workers experience financialised pressures is sparse. To understand workplace consequences of financialisation, I draw mostly on Cushen (2013) and Chambost (2013).⁷⁶

⁷⁶ There are other studies, notably Chan (2013) who identifies the consequences of financialisation for autonomous workers and McCann (2013) who examines the everyday consequences of offshoring. However, Chan (2013) focusses on a sector rather than a corporation, and McCann (2013) on offshoring rather than the whole framework of financialisation. Cushen (2013) also draws on studies of academic workers, which highlight

Chambost (2013) studied firms subjected to Leveraged Buy-Out (LBO).⁷⁷ In her study, workers reported that the companies' central objective became the achievement of financial performance targets over securing long-term development, and that management horizons all became focussed on short-term goals. This translated into greater pressures to cut costs, which took the form of decreasing job security, increasingly individualising wages and increasing the proportion of variable income in workers' total earnings. Workers reported added stress because of chronic staff shortages, the dominance of quantitative performance indicators, greater competition between employees and a decreased sense of power. They felt that managerial decisions were increasingly driven by financial considerations not based on their expertise.

Cushen's study (2013) analysed high-tech workers' experiences in a TNC subsidiary. There, workers reported increasing stress because of understaffing and what they considered unrealistic performance targets. They expressed exasperation with managers who would hype projects, then abandon them with the flick of a wrist. They felt that money was wasted without management ever intervening to stop these repeated missteps because corporate strategies were preponderantly geared to financial imperatives, resulting in a waste of resources. Cushen (2013, p.327) argues that the company's performance of an "excessive optimism was considered a hypocritical affront to [these workers'] understanding of themselves as intelligent, educated professionals." This gap between workers' expectations and their experiences led to employees distancing themselves from the company: work became just work, and they curtailed their expectations and personal investment in their jobs. These studies thus emphasise white-collar workers' deteriorating working conditions and loss of benefits, decreased sense of respect and increased detachment from corporate strategies. Based on these two studies and Cushen and Thompson (2016), I summarised the changes prompted by financialisation in **Figure 7.2**, and in Section 2, draw on these four main changes and their associated consequences to assess whether ST itself is being financialised.

the increasing insecurity and commodification of academic work, though this literature is not often connected to the financialisation literature.

⁷⁷ A LBO is a practice whereby investors and pension funds, drawing on equity and debt and using the company's assets as collateral, acquire companies seen as undervalued. Once the investors are in control, they often impose a program for the company to "deliver its potential," pay its debts and provide over five percent of return on investment (Chambost, 2013). Chambost (2013) argues that companies under LBO, given that they are directly managed for the purpose of creating shareholder value, exemplify "financialised" strategies.

| Change | Expression | Consequences |
|---|--|---|
| 1. Enhanced value extraction and cost cutting | Redundancies// layoffs | Perpetual shortage of staff, leading to stress, anxiety and work intensification |
| | (Temporary) outsourcing | Unexpected and higher costs |
| | | Less training, loss of skills |
| | Control of financial teams over each project and centralisation of decision-making | Local managers appear disinvested from their power and there is a lack of information |
| | | Increased insecurity |
| | Individualisation of the wage and reward insecurity | Increased competition between workers |
| Flexibilisation of the workforce | Greater fragmentation of the workforce | |
| 2. Perpetual restructuring | Increases in team-based production and changing project teams | Employment insecurity and role uncertainty |
| | | Frustration and loss of trust |
| | | Waste |
| | | Work intensification and stress |
| 3. Punitive performance regimes | Focus on numbers, financial performance and short-term “revenue-generation” targets | Evaluation by numbers |
| | | Shortage of staff |
| | | Individualisation of goals and performance |
| 4. Strengthening of market discipline | Hyping of projects: performance of the narratives financial markets and senior managers wanted to hear | Cynicism, frustration |
| | | Detachment, personal disinvestment, loss of voice |
| | | Feeling of being undervalued and/or stupid |

Figure 7.2: Summary of workplace changes and their consequences for workers, based on Bouffartigue et al. (2011), Chambost (2013), Crowley et al. (2010), Cushen (2013) and Cushen and Thompson (2016).

Crowley et al. (2010, p.422) argue that these changes reflect the “revitalization of scientific management,” i.e., the refinement of techniques to increase value extraction from workers. Crowley et al. (2010, p.422) link the rise of this phenomenon, which they ascribe as Neo-Taylorism, to what the literature above defines as indicators of financialisation. Indeed, Crowley et al. (2010) argue that “increases in deregulation, international competition, buyouts/acquisitions, and rising shareholder expectations,” i.e., consequences of financialisation, are “prompting firms to pursue flexible arrangements with their professional and managerial employees.” I mention Crowley et al.’s (2010) work because it connects the particular experiences outlined by Cushen (2013) and Chambost (2013) to the more systematic ways in which companies have implemented measures to heighten value extraction, but also because they claim that this phenomenon particularly targets white-collar workers. These workers, Cousin and Mispelblom Beyer (2011)

add, particularly resent the increased stress to perform and lack of dialogue because corporate discourse had previously told them they had autonomy and contributed valued work. Whilst they fail to explicitly mention it, these studies beg the question of whether white-collar workers will, as blue-collar workers did, organise to resist the rising alienation that such techniques entail. In Section 2, I show that whilst financialisation⁷⁸ did not lead to the collective mobilisation of white-collar workers, it did lead them, along with blue-collar workers, to build a discourse that delegitimised the changes they faced and clearly expressed the competing interests between themselves and senior management.

b. Financialisation in and of the semiconductor sector

In addition to favouring specific workplace changes, I now argue that the rising significance of financial pressures has exacerbated the pressures of scale faced by semiconductor companies, notably because of low capital investment and the emphasis on M&A activities. Brown and Linden (2009) claim that in the 2000s, private equity firms, awash with cash thanks to the real estate bubble, stimulated a ferocious cycle of spinoffs and M&As in the semiconductor industry (see also Hasenstab, 2013). With time, the cycle has only accelerated: in 2015, mergers and acquisition expenditures for semiconductor companies reached \$107.5 billion compared to \$16.9 billion in 2014 (Design and Reuse, 2019). **Figure 7.3** ranks the top companies by sales in 2004 and **Figure 7.4** in 2018. **Figure 7.4**, in displaying the merger and acquisition activities of these top companies also shows two threads that run through the sector, namely the large sums involved and states' oversight of semiconductor companies' fates. Despite ST being relatively protected,⁷⁹ these figures demonstrate that ST now functions within an environment dominated by increasingly large and concentrated companies. Comparing the two figures, one sees that in 2004, ST was ranked 6th in the world (Lapedus & Clarke, 2003), and the top company (Intel) declared an *annual* revenue of \$27 billion. By 2018, ST reached \$9.6 billion worth of sales, whereas some of its competitors achieved revenues of between \$30 billion and \$78 billion. It had fallen to 11th on the list.

⁷⁸ I understand the changes through the frame of financialisation rather than Neo-Taylorism, because Clark and Macey (2015) argue that changes in the management of labour should be considered within the framework of broader economic and political change.

⁷⁹ ST has remained outside of this consolidation frenzy after the merger of Thomson and SGS-Electronica. Explaining this, the CGT (2017d) claimed, "the joint control [by France and Italy] [stopped] the dismantling of ST," whilst CFDT unionists claimed that the states' "golden shares" prevented investment funds from taking over ST (notes, January 2016).

| 2004 Rank | Company | Headquarters | 2004 Sales (\$M) |
|-----------|-------------------|--------------|------------------|
| 1 | Intel | U.S. | 30,900 |
| 2 | Samsung | South Korea | 15,830 |
| 3 | Texas Instruments | U.S. | 10,700 |
| 4 | Infineon | Europe | 9,180 |
| 5 | Renesas | Japan | 9,000 |
| 6 | ST | Europe | 8,760 |
| 7 | Toshiba | Japan | 8,531 |
| 8 | TSMC | Taiwan | 7,648 |
| 9 | NEC | Japan | 6,469 |
| 10 | Philips | Europe | 5,692 |
| 11 | Freescale | U.S. | 5,519 |
| 12 | Sony | Japan | 5,070 |
| 13 | AMD/Spansion | U.S. | 5,001 |
| 14 | Micron | U.S. | 4,635 |
| 15 | Hynix | South Korea | 4,420 |

Figure 7.3: Ranking of the top 15 semiconductor companies in 2004.
Source: IC insights strategy Reviews Database (Lapedus, 2005)

| 2018 Rank | Company | Model | 2018 Sales (\$M) |
|-----------|---|------------|------------------|
| 1 | Samsung | integrated | 78,541 |
| 2 | Intel | integrated | 69,880 |
| 3 | SK Hynix | integrated | 36,767 |
| 4 | TSMC | foundry | 34,208 |
| 5 | Micron | integrated | 30,930 |
| 6 | Broadcom Acquired by Avago (2015) for \$37bn, failed to acquire Qualcomm for \$121bn because of the veto from the U.S. President | fabless | 18,189 |
| 7 | Qualcomm Failed to acquire NXP for \$44 bn because China did not clear the transaction | fabless | 16,385 |
| 8 | Texas Instruments Acquired Burr Brown in 2000 for \$7.6bn | integrated | 14,854 |
| 9 | Toshiba Acquired by Bain Capital-Led Consortium (2017) for £18bn | integrated | 13,801 |
| 10 | Nvidia | fabless | 11,951 |
| 11 | ST | integrated | 9,619 |
| 12 | NXP, Acquired Freescale in 2015 for \$11.8bn | integrated | 9,407 |
| 13 | Infineon | integrated | 9,210 |
| 14 | MediaTek | fabless | 7,891 |
| 15 | Sony | fabless | 7,715 |

Figure 7.4: Sales result for the top 15 semiconductor companies in 2018, and notes on mergers and acquisitions. Source: (IC Insights, 2018a, 2018b)

The contrast between the two figures demonstrates that the semiconductor sector, lubricated by financialisation, quite clearly displays the tendency towards centralisation outlined by Marx (1990), whereby companies grow larger by way of economies of scale and takeovers. In Chapter 5, I established that the capital required to remain technologically competitive enhances such dynamics. Over the last decade, these pressures have combined with mergers and acquisitions to further bolster the tendency towards increasingly large semiconductor companies. These pressures also interact with another two measures encouraged by financialisation, namely the emphasis on distributing dividends and the rise of specialisation. These developments further squeeze and pressure mid-size actors such as ST.

Brown and Linden (2009, p.146) note that “despite the rising R&D burden [...], leading chip companies have been spending at least as much on stock buybacks” as they do on R&D. This is where company size matters. Whilst large companies may consider *both* increasing dividends *and* large capital investment, mid-size actors may become too overstretched to do both. A fab’s competitive edge stems from its ability to capture innovation and continuously upgrade to install machines able to deliver the latest bandwidth on the largest wafers. This entails increasingly large capital and R&D costs, which large companies and foundries (semiconductor companies focussed on the production of chips) can consider more easily than smaller ones, whilst integrated corporations face the growingly prohibitive costs of both capital and R&D investments. The rise of foundries reflects the trend towards horizontal organisation which has appeared over the last twenty years (Luthje et al, 2013), whereby some companies have specialised: either only producing chips (foundries) or only designing chips and the software for them (fabless firms). Specialisation is one way for companies to respond to the increasing capital *and* R&D costs needed to develop semiconductor technology, alongside the rising need – or perceived need – to distribute dividends. Segmentation also performs the focus on “core competence,” so prized by investors, and decreases the level of investment needed, freeing up the means to distribute dividends. The rise of specialisation increases pressures on integrated firms, such as ST, which combine both. Charles stressed, “Whilst ST has ten thousand people in the front end, TSMC has fifty or sixty thousand people. [...] They are able to produce for much cheaper because they are much bigger.”

Growing specialisation also crowds out alternatives. Indeed, for mid-size integrated firms, one solution to the rising cost of production was collaboration. For example, in 2003, ST, Philips and Motorola combined investment efforts to create the 300-

mm R&D centre and fab in Crolles. However, by 2006, investment funds acquired Philips and Motorola, and imposed a fabless and outsourcing strategy on both companies. By 2007, the alliance in Crolles crumbled, leaving ST to bear the burden of all investments alone (Balas, 2009). The trajectory of this alliance illustrates how the financialised context both decreases survival options for mid-size actors and pressures them towards specific strategies, namely a fabless one (Luthje et al., 2013). As Charles claimed, the market *may* want ST, as a mid-size integrated company, to adopt a fabless strategy. He said, “financial analysts have been quite critical of ST for years for investing too much industrially in France and Italy...” I emphasise “may” because Froud et al. (2014, p.48) argue that “what ‘the market wants’ is as much a moveable discursive construct as a set of fixed financial targets.” As I show, ST’s management for a while considered the fabless scenario, to workers’ dismay.

As I have shown, financialisation at the corporate level entails a shift of workplace practices to extract the level of returns and present the ratios expected by financial actors. This relies notably on the renewal of Taylorist practices and their extension to white-collar work, the individualisation of the workforce, and the growing instability of work institutions and structures (Bouffartigue et al., 2011; Crowley et al., 2010). In addition, I showed how the logic of financialisation diverts capital away from the large investments needed to stay in the race of semiconductor development, magnifying the pressures of scale and tendencies towards monopolies in this sector. This has led a number of mid-size companies to choose the fabless option favoured by financial investors, and increased the pressure on the few integrated and mid-size companies that remain, notably ST. ST thus faces increasing pressures to shift to a fabless model, and to outsource its chip production to foundries and its testing and assembly to back-end specialists, only focussing on developing patents and designs. These changes are important to understand ST’s external environment and the increased competition it faces, and, as I show next, the changes in ST that workers reported and criticised.

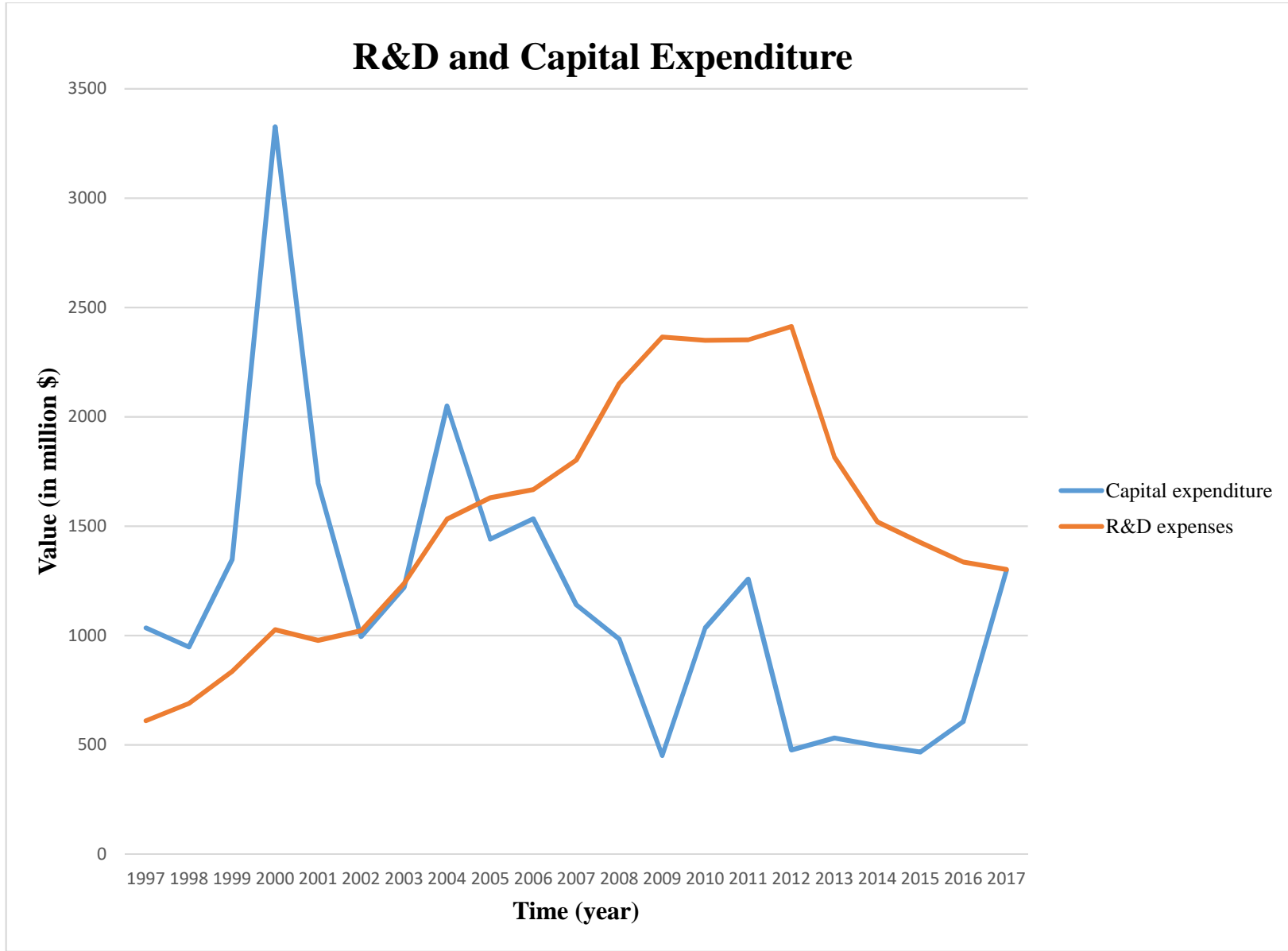
2. Working through financialisation

ST, since the mid-2000s, has laid off a sizeable number of its workers, closed several of its R&D divisions and manufacturing facilities (ST Annual Reports, 2009; 2013; 2017) and, since 2006, seen its revenues level off and decline (ST Annual Reports, 2009; 2013; 2017). I acknowledge that the fate of a company cannot be fully explained by shifts associated with financialisation.⁸⁰ Yet, workers in ST strongly believed that financialisation, understood as preferred corporate strategies to increase shareholder value, had seeped into ST's practices and explained its decline. Blue- and white-collar workers resented the consequences this entailed, in particular their sense of greater insecurity, increasing stress and growing alienation at work, but also the threat to the company's industrial competitiveness more generally. Here, I first examine ST's allocation of income, demonstrating that it has shown an increased focus on value extraction within a broader strategy towards ST becoming fablight. I then show that workers faced ramped up cost-cutting measures and increasing bureaucratic constraints, along with growing dominance of financial discipline over their work, leading to heightened subjective precariousness, stress and fear for the company's survival. My analysis shows that workers created a coherent narrative according to which financialisation undermined their sense of self and their business' industrial future. This discourse, I argue, was a key element in workers resisting the imposition of a financialised outlook.

a. Value extraction

Figures 7.5 and **7.6** (below) describe the amount ST has allocated to R&D efforts and CapEx (capital expenditure), since 1996, in absolute terms and as a percentage of net sales. Overall, the data displays a sharp contrast between the 1997-2006 period and the 2006-2015 period. R&D expenditures increased until 2012 when they represented 28% of net sales; they declined to approximately 15% in 2017. After an ambitious jump between 1997 and 2001, CapEx fluctuated, displaying a general decline until 2017. The decline was particularly sharp between 2007 and 2016, which reflected a conscious corporate strategy.

⁸⁰ Reverdy (2014) claims that ST also lost the prominence it held in 2003 following bad choices, the increasingly unfavourable euro/dollar exchange rate, the 2008 financial crisis, and unexpected market turns.



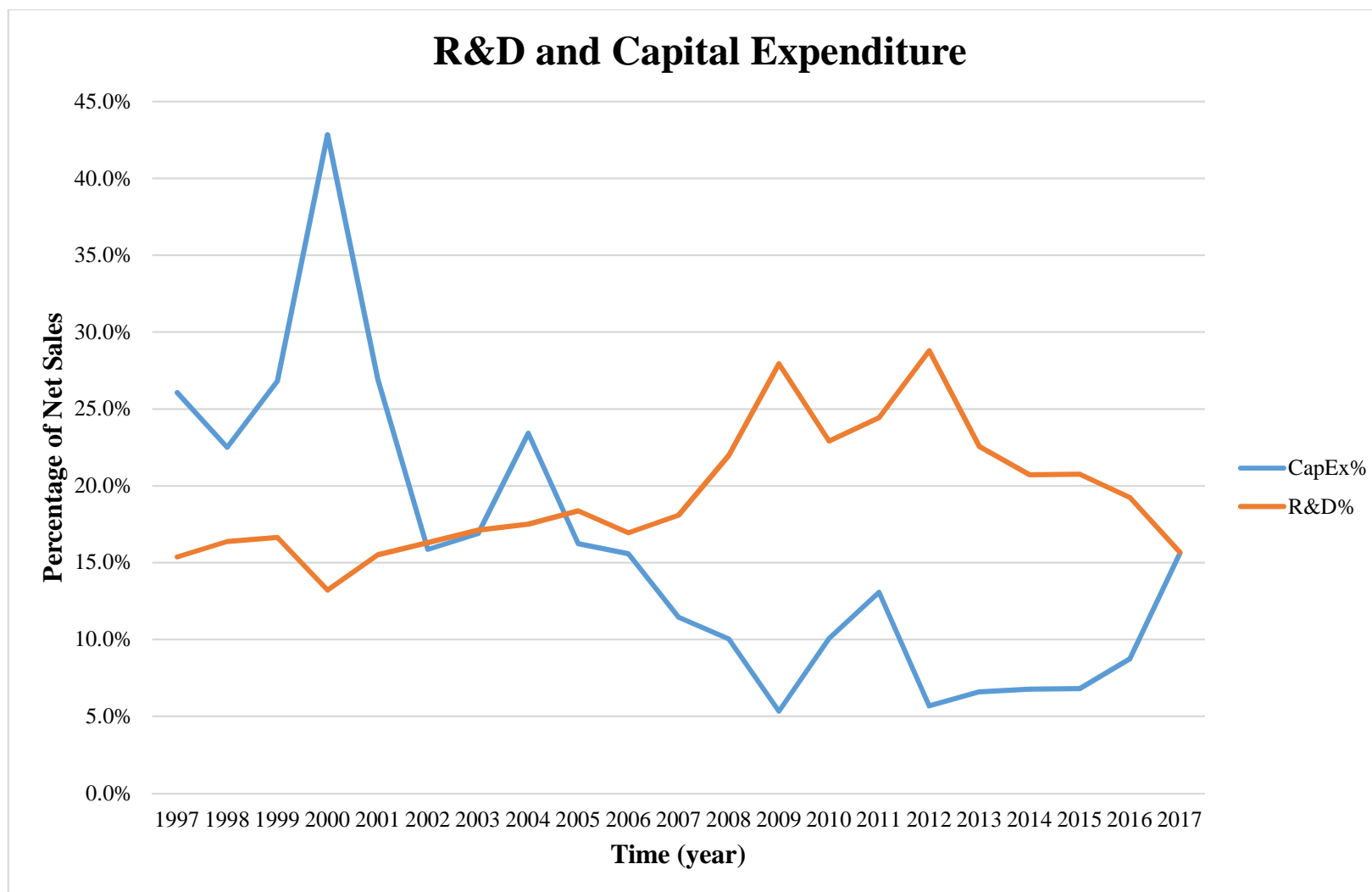


Figure 7.5 and 7.6: ST's R&D and Capital Expenditure between 1996 and 2018 as absolute value and as percentage of Net Sales.

Source: ST's Annual accounts since 1996

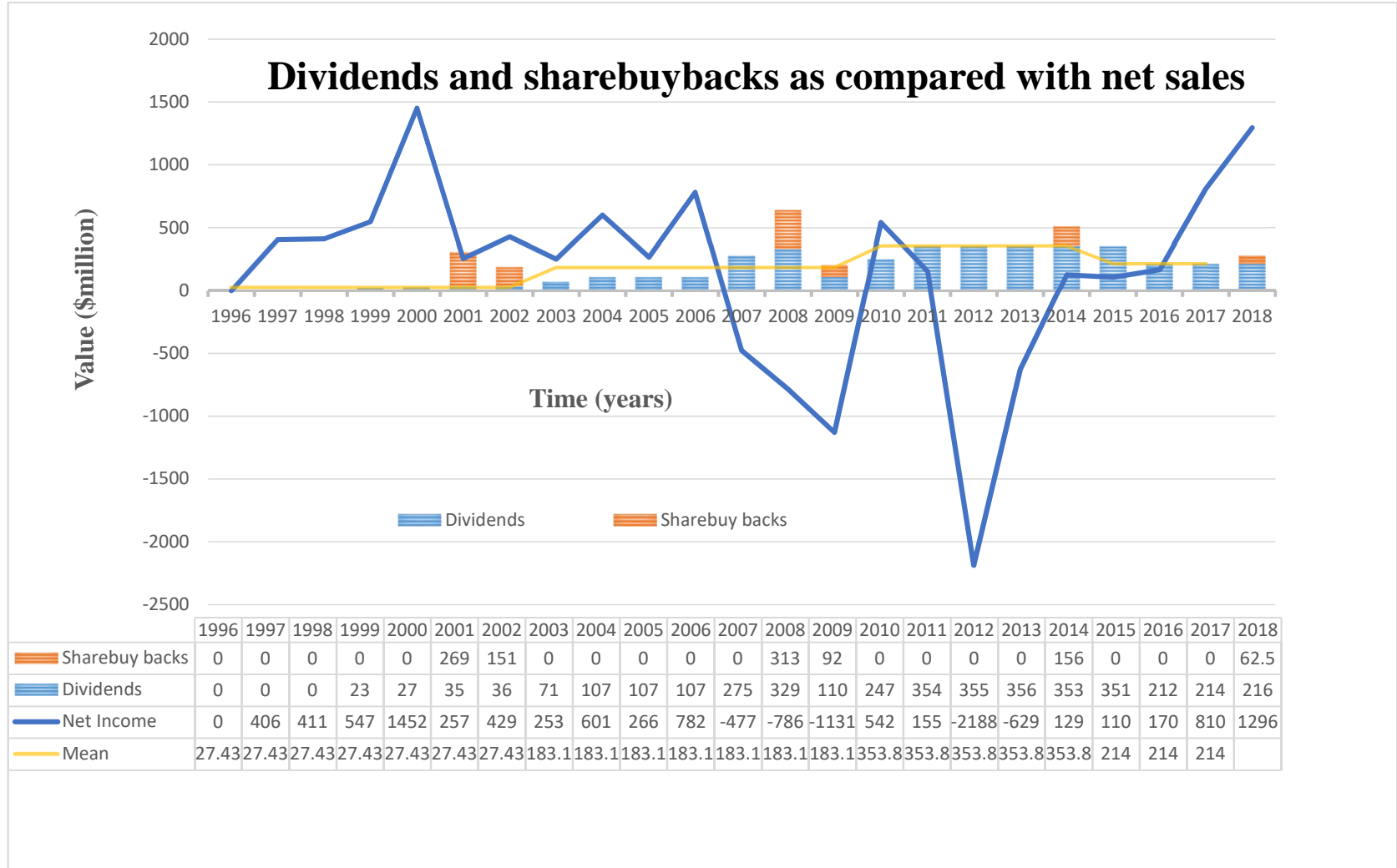


Figure 7.7: Value of ST’s dividends and share buy-backs between 1996 and 2018

Source: ST’s Annual accounts since 1996

In 2006, ST Annual Report announced, “our goal is to reduce our capital investment spending to sales ratio from above 20% in the past several years to a target of 12%” (p.39). The report alludes to a fables future, affirming that the management team had “pursued various initiatives to reshape [the] company [...] [notably by] establishing a less capital-intensive business model” (p.22). Mr. Bozotti, CEO of ST, confirmed this strategy in 2007 (ST, Annual report 2007, p.22). He reiterated it in 2008, by declaring, “we moved further on to an asset lighter configuration” (ST, Annual report 2008, p.5) and celebrated it in 2009, announcing that in 2009 CapEx represented “a 50% reduction in comparison to 2008” (ST, Annual Report 2009, p.6). Along with decreasing investment, ST increased the value of dividends and stock buybacks (see **Figure 7.7**). These increases took place in absolute terms and as a percentage of net sales. Dividends increased from representing 0% of sales in 1996 to an average of 3% between 2007 and 2011 and more than 4% between 2012 and 2015. Even when ST sustained losses, as it did during the 2007-09 period and in 2012-13, dividend levels were maintained or increased. However, in 2017, ST increased CapEx to \$1.3 billion (>15% of ST’s net sales) and committed \$1.3 billion to R&D. This level of investment was sustained in 2018 (ST, 2018). The change followed a two-year-long mobilisation by unions (see Chapter 7) and it contrasts sharply with the company’s strategy between 2007 and 2016, when CapEx averaged 8% of net sales.

The three figures show that increasing dividends and decreasing investments often overlap. This makes intuitive sense: money not invested is available to redistribute to shareholders. If one discounts exceptional years of share buybacks, three phases in ST’s value distribution emerge:

- between 1996 and 2006, with low dividends and considerable investments;
- between 2007 and 2015, with higher dividends and lower investments;
- since 2016, with more moderate dividends and renewed investments.

The beginnings of these periods roughly correspond to the entry of ST into the stock market under Mr. Pistorio in 1996; the rise of Mr. Bozotti as CEO in 2004; and the period that followed the unions’ campaign. Whilst I show in Section 3 that workers believed the correlation between ST’s strategy and who made up its senior management team was significant, importantly here one sees how ST’s allocation of income pursued a financialising logic, privileging dividends and a fables or fabled future at the expense of CapEx, and, though in a less pronounced fashion, R&D investments.

Not only did financialised trends translate to the allocation of money in certain ways but the senior executives' discourse during this time also reflected an emphasis on protecting shareholders' interests. For instance, during a quarterly conference call after Mr. Bozotti announced an ambitious capital investment plan in 2017, one could hear the investors' subtle pressure, and the immediate reassurance by Mr. Bozotti that the plan would not harm the dividend payment:

BNP investor: And the CapEx increase for this year, where is it going exactly? [...]

Mr. Bozotti: So, the cash flow, let's say, anticipation that we had given would not change, no? We would certainly cover the distribution of dividends, despite the increase in CapEx. (transcript by Seeking Alpha, Confcall2017Q2)

This interaction, though anecdotal, demonstrates an instance of ST's chief executive attempting to reassure "the market" after the introduction of a large capital investment plan. Scholars stress that financialisation is based on self-sustaining performances: senior management teams need to be *seen* to raise financial value and convey "what the market wants" (Cushen, 2013; Froud et al., 2000). Whether or not investors believe in such performances is a different matter. Charles claimed "in a society that is losing money to distribute dividends.... well everyone, financial investors included, would have preferred growth - no one is tricked." The analysis of ST's allocation of income and senior management's public interventions demonstrates that, between 2006 and 2015, ST's senior executives embraced and executed a strategy which allocated a significant portion of ST's reserves to securing shareholder value, whilst investments declined. This data offers a first step to substantiate the claim that ST, until 2015, was "financialising." As I show in Chapter 8, unions drew upon these clear material changes to denounce ST's senior management team and request that it be replaced.

b. Cost cutting, centralisation and outsourcing

According to Cushen and Thompson (2016), financial presentations are based on *ratios*, not *values*. They explain that firms often reduce "the denominator [costs] through cost reduction" (p.356) rather than increase the numerator [profits], since cost reductions and outsourcing can improve the ratios in a short time frame, whilst investments are more risky. Cost cutting and outsourcing measures thus help companies to perform a focus on shareholder value. ST workers noticed this shift

towards cost cutting and outsourcing in lieu of a revenue growth strategy, and criticised it for leading to self-defeating consequences. ST's annual reports from this period do not say which percentage of ST's production is outsourced to foundries. Senior management's public announcements however spoke of a growing emphasis on outsourcing. For instance, in 2018, Mr Chery, then CEO, explained ST's decision to increase the outsourcing of cutting-edge technology⁸¹ because it would "support ST's medium-term growth in order to mitigate our capital expenditure" (Confcall2018Q2). What's interesting here, is that he presented outsourcing as a strategy to *offset* capital expenditure, illustrating that he believed ST needed to achieve certain ratios, and, if these were threatened by more ambitious investments, they should be counter-balanced with outsourcing.

Workers believed that these changes threatened ST's industrial competitiveness. They claimed that the foundries, as a result of ST's orders, would develop the industrial knowledge to put the newest chip design into production, whilst ST would become dependent on them, allowing them to set prices. Peppe maintained that "[our] added value is to know the technical aspect. If you lose [this], you will depend on anybody." Balthazar remembered that, "once, [ST] wanted to renegotiate the contracts [...] [The foundry] told them, 'No, it isn't this price, it's this one'." Workers moreover believed that subcontracting exposed ST to the risk of IP theft. Charles explained, "There is a risk that [the foundry] copies the technology for other clients... [The foundry] is far from stupid." Luthje et al. (2013, p.222) call this behaviour the "modularity trap" and correlate it with financialisation. They claim companies lose "innovative capability because of excessive outsourcing of strategic knowledge [...] in the name of shareholder value." When I probed Charles about why ST had outsourced production of a key technology despite the risks, he suggested a similar correlation, noting that

ST potentially deemed that the five hundred or eight hundred million dollars needed to build the fab, well those [sums] might be criticised by financial analysts or even by the states. [...] [Both] would criticise [ST] for investing too much and taking too much risk around industrial production.

Asked why ST has not acted as a foundry for other companies, given that some of its production lines were idle, Charles speculated that "this may be because the

⁸¹ As a bittersweet anecdote, the technology he mentioned then was core to the justification for the public funding ST received under Nano2017. Rene and David explained, "the government gave 500 million euros [and then realised] that ST sold them a vision that [technology] was the future and [...] [ST] gave everything to [another company]. [...] Because [ST] doesn't have the capacity [to produce this technology]."

margins are not good enough [...] ST could do [foundry work] to load the fabs, to sustain the means of production, but they don't want to because it wouldn't look good for the financial presentations." The quotes from Charles and the CEO suggest that the desire to present attractive financial figures overshadowed considerations around profit or industrial secrets. In this aspect and the next ones I examine, workers criticised the gulf between management's strategy and need to develop the company.

In addition to outsourcing, Damien argued that ST had switched its strategy towards cost cutting on account of a vision which he assessed as self-defeating,

[The financial director] is conscious of the [importance] of critical size,⁸² so [he] cut costs and jobs! [...] But [...] [Pistorio] always said that one should drive a semiconductor company like an automobile driver [...] when one arrives in a turn one must brake strongly with the left foot and accelerate really fast with the right foot to get out of the turn quickly. So one must take orders, make loads of technologies. We should never be overcome by the fact that we are looking for a balance[d] [budget] [...] We spend money today because there will be tomorrow and tomorrow there will still be tomorrow. [...] When one cuts, one cuts people, investments, even bits of factories and then to start again, good luck!"

This drive to cut costs resulted in increasing bureaucratic constraints around spending money, limits which workers saw as absurd. Jean complained, "each cent, you need to justify it three or four times, [when] you ask for something to be bought, it takes two months [...] so you don't want to ask [...] when that can block the fixing of a machine or the qualification of a product!" Etienne described the ludicrous ramifications of this policy in Tours,

[For an order] above €1,000 we need to ask for permission, so we have people who will call suppliers asking for an invoice at €999.99 or divide the order in two. [...] [This leads to] ridiculous situations where engineers and project leaders spend half of their time to try to reduce costs to avoid asking for permission.

Workers thus complained that the cost-cutting logic suffocated their work logic. Similarly, Arnault lamented that these constraints delayed expenditures and hindered production, citing one incident,

The ramp-up [increasing production load] was planned for January-April, [but] machines arrived in December. [...] [As a result], we were qualifying the machines as we were delivering [chips] to the client. [...] Why? Because they didn't want to unlock the budgets. [...] The financial strategy is there, and it threatens production.

⁸² This term refers to the need for semiconductor companies to achieve a certain "critical size" in order to achieve expected financial ratios, either as a fabless company or as an integrated company with growing revenues to sustain the growing need for CapEx.

Workers emphasised the consequences these constraints had on ST's industrial capacity and their ability to do their work well. Edern confirmed, "[I hope] that we find this autonomy again, because this really slows down work," whilst Donald said, "[the €1,000 limit] slows down all the qualification [...] [I feel that] we don't totally respond to the clients [...] [because] finance stops us." Workers' comments illustrate that they resented the budgetary constraints for the increased workload they entail but also because they believed that they threatened ST's production capacity and its ability to respond to clients, i.e. its *business*.

These impacts were particularly highlighted by workers in Tours, who claimed that increasing bureaucracy led to "a loss of industrial autonomy" (Arnault), whereas the very survival of Tours depended on this autonomy. Charles stressed that the Tours site "is suffocating [...] everything is controlled to the cent, they can't take a risk and launch new projects." Previously, the Tours director "sometimes, didn't tell Pistorio at all what he was up to, [...] and suddenly delivered a new product! [...] He had the knowhow and Pistorio gave him room for initiative" (Charles). Damien confirmed,

Each time the [CEO in Tours] talked with Pasquale [Pistorio], Pasquale said, 'When are you going to start losing money so I can close your site, because it would be better placed in Singapore.' [And the Tours CEO answered,] 'Never, because I will always make more money than Singapore!' 'Well, that's good' [Pistorio would say]. And Tours was never closed. And they have become global leaders in their field. [...] What is really important is that [Pistorio] let these different local sites run loose, to a certain extent, and these sites created capillary roots with the region, the universities, the companies, and the schools. [...] Against all odds, each time Pasquale said, 'I'm going to close Tours,' he would discover that Tours had invested in really modern technology, when no one had told them to do so. So [Pasquale] would yell a bit, and then go see and say 'Well, hmm that's good.' And then say: 'Do it like Tours!'

By these accounts, creativity and autonomy on the part of workers and the site director saved the Tours site from offshoring. Workers' recollections introduce some agency into the story of offshoring, and criticise cost-cutting measures for suffocating the autonomy Tours needed to develop technology, a narrative, which I return to throughout the chapter, according to which financialisation threatened *industrial*, or *production-focussed*, work.

Blue-collar workers agreed with this critique from white-collar workers, citing greater pressure to cut costs and an aging industrial infrastructure as symbolising a shift away from an industrial vision. In Crolles, Louis explained, "Now, you need four or five different signatures to order something, even a bolt!" In Bouskoura,

Rachid complained, “We have machines that are twenty-three, twenty-four years old.” Not only were machines not upgraded, but existing machines were also neglected. Otto said:

The previous site director said that we’re in an industry, we run the machines, whether there are pieces to produce or not, you run them! [...] Because we know very well that industrial machines, when you stop them, the liquids stagnate, and when you start them again, you have problems of contamination.

Workers were asked to unplug machines “and then, we use them to mine spare parts for other machines, which means that there is no chance of re-using these machines” (Otto). When I asked him why, Otto argued that this was “because [running them] is a cost. [...] We have gotten to such a level of budget restriction that they analyse [costs] even to this point [the energy and water costs of running a machine].” Liam outlined a similar practice in Malta. He said, “We cannibalise machines,⁸³ [...] to reduce the costs, [...] because of the depreciation, things like that. [...] I don’t understand either, but the cost of the product will diminish if you take [the machines] off of the line.” Just like the white-collar workers above, Otto and Liam expressed their irritation as workers who deal with and care for machines. They protested that machines were damaged – either for spare parts or through inactivity - just to cut costs in the short term and suggested that these practices did not make *industrial* sense, in light of the previous ambition driving ST when machines were run because their functioning was seen as core to what ST does. Blue- and white-collar interviewees thus agreed on the issue of financialisation threatening ST’s core competences.

The push towards cost cutting was matched with demands for increasing productivity. In Morocco, workers reported increasing machine-to-worker ratios (notes, February 2017). In Malaysia, Afiq explained, “Operators now handle eight to nine machines and they can’t sit down,” to which Nayla added, “Before, we only had two or three machine per workers but now with increased automation, workers easily have eight to twenty machines with increased production quotas.” Front-end operators reported similar pressures to increase productivity. Louis noted that “since Bozotti arrived, [...] work has become a cost, so we have to focus on being profitable. [...] Every person needs to be 150% productive. [...] There is not time for breaks, [the person] must always be producing, producing, producing!” Louis added, “People have more and more machines to look after, so they have less time to think about their work, how to improve it, use techniques to restart the machines, have a bit of time for

⁸³ This referred to mining for parts in machines which are turned off.

themselves.” Whilst they couldn’t prove the changes since estimating only the increasing number of machines supervised by each operator ignores the machines’ increasing productivity, workers clearly felt the impacts of increasing pressure. David in Rousset explained, “It’s not totally false when [managers] say that machines have improved, however that doesn’t justify [everything]. The work pace has increased. Operators can’t breathe. [...] [And, as a result], there has been an increase in work-related injuries.” Carla likewise noticed, “Before there was somewhat the time to do things, now you need to be fast, [...] so it’s more stressful and there is no time to speak.” Workers felt that they were pushed to their limits and that this had a dehumanising impact on their work, highlighting the personal consequences of cost-cutting measures along with their industrial ones. ST’s allocation of income, cost-cutting measures and workers’ experiences thus reveal a growing emphasis in ST on *value extraction*. The pressures percolated into operators’, technicians’ and engineers’ working lives, increasing stress and, according to workers, undermining ST’s competitiveness, capacity to innovate and its means of production.

c. Ongoing pressures, restructuring, and increased stress and sense of precariousness for the remaining workers

The third shift workers noticed and criticised, again both for its consequences on their working conditions and on ST’s competitiveness, was the company’s growing emphasis on restructuring its divisions, plans which often lead to hundreds of layoffs and for the remaining workers, increased stress and sense of precariousness. ST’s annual accounts reveal at least six restructuring exercises since 2005 whereby divisions were created, merged, spunoff, outsourced and merged again. **Figure 7.8** (below) summarises the plans’ consequences for workers and illustrates the financialised logic behind them. Froud et al. (2000) argue that reshuffling exercises aim to conform to investors’ expectations. Workers also made this link. For instance, in 2005 an engineer in an interview already complained, “[ST] isn’t an industry anymore. [...] Financial imperatives dominate. [ST] will open posts, two weeks later will close them. [...] All that for shareholding bosses who only think of money” (‘Les impactes,’ 2005). Communications from the CFDT (2014) likewise correlated ST’s 2014 plan with financial pressures premised on a short-term logic,

[The plan] reproduces the logic to continuously cut costs and reduce spending. [The] ultimate goals [of this logic] focus on managing mostly the short term and are underwritten by an income logic (under pressure from shareholders), which considers the company like a commodity.

The union’s choice of the word “commodity” is meaningful: a commodity is prized for its exchange value rather than its use value. Claiming that ST’s logic commodifies ST, stresses, by contrast, that the company shouldn’t be treated as a mere item to extract value from, but rather as an organisation able to sustain livelihoods and develop technologies. This critique, as I show, fed in the wider discourse produced by workers to fight for an industrial vision for ST and illustrates the ongoing contradictory nature of the in/for/against/with nature of the relationship between a worker and their company.

| Date | Plan | Reported aims and results | Reference |
|-------------|---|---|--------------------------|
| 2005 | “additional restructuring efforts to improve profitability” | closure of R&D centres in Karlsruhe and Malvern, and “reduce the company’s workforce by 3000.” | (ST, 2009, p.F-61) |
| 2007 | Numonyx spin-off | 1000 Italian workers under threat | See Interlude |
| 2007 | “manufacturing restructuring plan” | closed production sites in the U.S. and in Morocco | (ST, 2008, p.F-41) |
| 2008 | “manufacturing plan” | to “reduce costs by over \$700 million in 2009” which Mr Bozotti reported “will unfortunately affect about 4,500 net jobs worldwide.” | (ST, 2008, p.6) |
| 2009 | “ST-Ericsson’s restructuring plan” | “a re-alignment of product roadmaps to create a more agile and cost-efficient R&D organization and a reduction in workforce of 1,200 worldwide” | (ST, 2011, p.F-41) |
| 2011 | “ST-Ericsson’s cost savings plan” | “employee termination” for 500 workers | (ST, 2011, p.47, p.F-40) |
| 2013 | “manufacturing consolidation plan” | closure of the Longgang back-end site | (ST, 2013) |
| 2016 | Digital division plan | closure of the digital division, layoff of 1,600 workers | (ST, 2016) |

Figure 7.8: ST’s restructuring plans since 2005 and their reported aims and results.

Source: ST’s Annual Reports

Furthermore, these restructuring plans, workers held, made no business sense and neglected workers' expertise. Otto reported that, "people just tell us ST's strategic choices are bonkers!" For instance, in 2012, ST decided to outsource a design unit, despite workers warning that this would be more expensive and less effective than the status quo, given the imbrication of this unit with other R&D activities (CGT, 2012b). The plan was halted in 2013 after significant mobilisation. The CGT argued that ST's obstinacy in carrying out the plan as far as it did led to "hurt colleagues, whose trust in the company and management has been tarnished" and that the plan dismissed "[our] colleagues' skills and desire to defend the collective interest of the company" (CGT, 2013a). They added, "This is a typical example of what shouldn't be done and what ST does more and more under the pressure of financial criteria." Another time, Richard criticised "baffling strategic choices" when workers in France "were given tasks because ST needed to cancel jobs in England, but there was no transfer of skills!" Despite receiving warnings from the unions about the likely consequences of closing the R&D security unit in question, a year later management had to hire new workers, having by then, lost needed expertise (CGT, 2015a).

In addition, workers complained that the unremitting internal changes contributed to a sense of increased stress and job insecurity. Restructuring exercises that merged, renamed and unmerged divisions haphazardly, led to the ongoing churn of projects. This, according to Linhart (2015), encourages the rise of subjective precariousness, as workers do not feel confident in performing their new tasks, having little time to adjust to them. Workers spoke of such feelings of subjective precariousness. Madeleine explained, "We stop projects and then we start them again. There are teams that spend their time stopping project[s]." Martin, an engineer, argued, "we have totally fantasy-based schedules. [...] For a project where a team of say twenty would need eighteen months, we're asked to do it in six. [...] At the end, [I feel] that the only interest of this company is to make cash." This instability had an impact on workplace relationships. Julie said,

From one day to another, you are in another team, or you come back to your team and your manager has gone. [...] As managers are thrown back and forth between teams, they don't have the time to get to know us and, for all intents and purposes, our work. As a result, there is a loss of trust. They police us [and] set indicators.

Along with stress came job insecurity. This, for instance, was particularly acute for workers who fell under Statement Of Work (SOW) provisions, when the Grenoble digital division was closed in 2016. Then, workers could either accept the voluntary redundancy plan (for 430 workers) or change jobs internally (600 posts), though 184

of these posts were under SOW provisions (CGT, 2016e). SOW workers would join different project teams, but were not attached to any team. Julie explained, SOW workers “don’t have a fixed post [...] some are made permanent [in the teams] others not [and] we don’t know why.” SOW workers have a permanent *contract* with the company, but they need to have a *post* in a team to be secure (CGT, 2017a). Whilst SOW status ensured that no worker was fired, it also introduced a normalised insecurity, which according to Pierre, “gnawed at people.” Pierre explained that “[SOW workers] still have a job and salary, but it isn’t easy for them to see their future. [...] They just have an ultimatum over their heads, [...] maybe ST will do a redundancy plan afterwards.” Pierre’s description of SOW workers’ sense of living with an ultimatum illustrates Linhard’s claim, and the threat that underscores such precariousness, since, as shown in **Figure 7.8**, many of these restructuring plans led to layoffs. This uncertainty also plagued operators. Otto said,

There were three or four years when we had partial unemployment⁸⁴ and you think it smells of pine trees [...] which is what you make coffins with... [...] That’s also why the voluntary redundancy plans work, because workers tell themselves that sooner or later [ST will close] and potentially think, ‘the earlier I negotiate, the better deal I’ll get.’

Thus, as Cushen and Thomson’s (2016) note, continuous organisational upheaval led to employees experiencing heightened employment and role insecurity, and created a deleterious climate of anxiety. Precariousness came as somewhat of a shock for white-collar workers, who have been encouraged to think of themselves as more valuable and protected than their blue-collar counterparts. On the radio, the engineer quoted above realised, incredulously, that offshoring and financialisation also threatened his work (‘Les impacts,’ 2005). These statements demonstrate again workers’ dual critique: workers criticised ST’s restructuring plans for the *financialising* strategy they embodied and for leading to a ramped-up emphasis on targets, surveillance, stress and precariousness, *across* the workforce.

d. Market discipline and the rise of a punitive performance regime

Having illustrated the regular restructuring efforts that took place within ST, I last show that the rising preponderance of financial metrics in ST led to an increasing feeling of alienation amongst workers. Cushen and Thompson (2016, p.357) argue that firms’ accounting techniques “position financial targets central and dominant in

⁸⁴ Workers do not work but receive 75% of their wage and keep their contract, in order to decrease the costs of the company when faced with a lack of demand.

decision making.” ST workers similarly saw an accounting logic come to dominate their work. For Pierre, the use of SOW workers in Grenoble epitomised this logic’s dominance. He noted the incoherence of keeping workers in SOW when, “at the moment we are in a growth phase. [...] We need people!” Several workers suspected that the answer stemmed from accounting procedures and the desire to improve financial reporting targets.⁸⁵ In budgetary terms, the costs of SOW workers are reported in the impairment costs of closing the digital division, rather than in the labour costs of their teams, thus boosting the company’s performance ratios. There were other areas where workers noticed that the goal of achieving attractive ratios overshadowed other considerations, and crucially for workers, their sense of being valuable.

For instance, workers noticed that management increasingly fiddled with workers’ holidays or paydays to improve their financial presentations. Emmanuelle explained the logic: “There are consolidated numbers for each trimester, and [their value] makes the value of the share go up or down.”⁸⁶ Workers pointed out that this focus on ratio was upheld regardless of the impacts on workers *or* clients and directly linked these practices with a financialised outlook. A union leader claimed,

[Every three months, ST presents its financial results and] it never fails, two weeks [before] [ST] will freeze investments and new hires, or even force us to take holidays to [...] present better balance sheets, which is absurd from an industrial perspective. [...] In the name of presenting [better] reports, they explain to people it is better for them at one point not to be there. [...] That’s not a saving from an economic perspective, where one could say ‘money is a bit tight, let’s see where to save.’ No, these are financial fluxes that they optimise because they need to present reports. (in Balas, 2009, p.405)

Pascal explained, “When you take holidays, it fictitiously changes the quarterly numbers” by decreasing the labour costs, as holiday pay is itemised separately. He added, “At the end of the year, it amounts to exactly the same thing, so that’s purely financial. [...] It’s a short term financial logic.” Although workers were routinely paid at the end of the month, Alain remembered when, “one year, to avoid too great a cost ratio, they delayed payday to the fifth. [...] After, [workers] suffer the

⁸⁵ These workers asked for these comments to be anonymous.

⁸⁶ On a corporate side, one sees such considerations being presented as well. In the investors’ conference call of Q2 2018, Mr. Chery explained that “on Q3, we will have the positive impact of the seasonality. You know that in Europe there are a lot of – number of days of vacation.” Thus here, “seasonality” is seen as positive, because greater holidays lead to lower labour costs on a quarterly basis.

consequences [...] That's the reality, just to make some savings, the guys [sic] totally disregard others!"

Whilst these remarks concerned everyday working conditions, some of the consequences were more serious. Emmanuelle contended, "An extreme example was when Bozotti announced in May 2015 that they 'had to do something' [about the digital division]. It was purely a financial declaration to reassure investors." The declaration was followed by the layoff of 1,600 workers (see Chapter 8). Workers' reactions show that they were conscious of the financial logic driving these measures, a logic which, they added in a unified voice, symbolised how ST disregarded their value to the business. In Malta, Aaron explained,

[ST] started looking at everybody as a number. [Before] if somebody left, they wanted to know why: 'Why are you leaving the biggest company in Malta?' [...] especially [engineers] and technicians. Then, within 6 months: 'You want to leave? Yes, you can leave now; you don't even need to work your notice period.'

In Morocco, Dahlia complained that ST had once been a company that technicians and engineers had sought out for its quality training, but more recently, workers no longer wanted to stay because they felt ST treated them as numbers, rather than as valuable resources (notes, February 2017). In Catania, Peppe said that Mr. Bozotti told them when they were complaining, that they could just leave (notes, June 2018). In France, Yann argued that the 2016 redundancy plan created an attitude of "if you want to go, just leave!" [...] Even PhD students [who] are at the cutting-edge, [ST] doesn't encourage them to stay!" Madeleine argued, "ST no longer has a vision for the workforce, which they now call 'the people' [in English]. They're interchangeable, you can take them, release them, all [management] wants is to get the cash and then leave."

Fligstein and Shin (2003, p.5) argue that financialisation shifts how management values workers, viewing them no longer as partners but "as costs to be minimized." Likewise, Bachet and Compin (2013, p.5) contend that companies under a financialised perspective apprehend work "not as a skill generating value but as a burden generating costs which limit the possibility to create value for the owners." Workers' experiences of corporate practices left them feeling that they were no more than pawns in a game of financial reporting in which they had no value. They resented the lack of recognition of their worth and the fact that their value was disdained not based on ST's growth needs, but on financial goals. This feeling, interestingly, was shared across sites, as quotes from union leaders above show. Further, they demonstrate by contrast workers' ongoing desire to have value and to

do meaningful and, crucially, *productive* work. Workers underscored this desire as they expressed frustration with financial goals overshadowing discussions on developing technology. For instance, Arnault saw the invitation of the financial controller to a meeting between union and management representatives as an illustration of this financial vision impinging on a production-focussed one. He said:

I think that we are an industry: You should separate the finance side from the industrial side. Because the industrial side, that's a job where you work on a product. I would say that that costs don't hold a major importance for us. [...] The job [of the financial director] should be to find the funding to finance the production of the product. [...] But now we are getting to a situation where you almost have no means of production, but the guy [sic], he is happy because he sees his expenditure go down. [...] But we don't produce anything! 'That's fine, my costs are going down!'

Etienne similarly explained, that when he arrived in 2000, “we still had R&D goals,” but by 2017 goals had “slipped into reducing costs. Work was to reduce costs. Do as you wish, you can develop a new product, but the goal is to reduce costs. It is not to innovate, innovation is in [cost reduction].” Pascal vented against the dominance of financial goals: “Total revenue is not a goal! For sales teams maybe but not for developers like us! No, what we care about is to develop product!” One hears blue and white-collar workers’ nervous irritation: the financial focus undermines what they deem important to their job - creating innovation, securing clients’ satisfaction, maintaining machines and producing chips. Whilst they acknowledge the importance of costs, they insist this *should not* be how their work’s value and goals are set. Lazonick (2010, p.24) argues, that, in financialised corporations, business executives come “to view the corporation as a financial asset from which value can be extracted rather than as a productive asset through which value can be created.” Workers’ reactions show that they *resisted* this conception of their company. They wanted to create products, not achieve financial targets and felt that the financial logic contradicted and undermined their professional logic. Agency as conceived by Scott (1985) and Katz (2006) can also be asserted as passive refusal, and this is what happened. The dominance of financial targets decreased workers’ willingness to invest their energy in their work. Madeleine explained, “You don’t want to give like you used to, and we used to give! [...] now, [workers] just don’t want to [...] because they get nothing in exchange” (echoing Cushen’s 2013 findings).

As much as it was about the business, there was also something personal in workers’ resentment. Workers lamented the fact that their jobs were no longer technically exciting. “For twenty years, [engineers] did wonderful things and now, well,”

Charles said, “[They’re] not in the latest technology.” In Grenoble, following the closure of advanced R&D units, Madeleine complained, “when there are interesting things, we stop [them], [such as] the set-top boxes etc.” Edern agreed, observing that “workers complain that their job doesn’t have much scope. [...] There is a loss of responsibility, the job of the engineer becomes the job of the technician [and so on].” Jean, a technician, described the consequences of this shift on morale,

This contributes to a sense of frustration. [...] We had a job that was relatively interesting; we always worked in collaboration with an engineer on [a] project. [...] Now we have a more operational job. [...] We have to think less, but [thinking] is so important to feeling good!

Front-end operators as well regretted that their tasks required less thinking and felt increasingly mechanical. Louis said,

[ST] had done [previously] a campaign, [...] to enrich the operator job, so that [the job] was interesting. This has totally disappeared. [...] Now, you just tell the person to load the machine, not to break the disks, to correctly position the basket and that’s it.

When Alessandro started he could decide

How [long to] leave a product in acid, [or] calculate how fast the acid works on the product. Instead, nowadays, you have specific [guidance] that you have to read [...] and do it exactly as is written. [...] What you basically do is, you serve the equipment like a walking smart monkey.

Angelo echoed these words, saying he felt “like a monkey. It is more mechanical, [...] there is no space for the human.” Workers’ quotes suggest that, *on both sides the collar line*, workers continue to desire a job, which stimulates and confirms their inventiveness and which provides them with meaning. Christophe lamented that, “at the moment, a lot of workers come to work, but they don’t know why... well, just for the wage at the end of the month.” Marx argued that, under capitalism, workers become alienated from their labour, losing the sense of being able to express and see themselves in their work. Yet workers have always tried to make work a process where they can “invest their knowledge and skills to produce something meaningful” (Rathzel et al., 2014, p.258). One sees this desire in workers’ yearning for productive work. If authors have focussed on consumption as the locus of identity formation (Bauman, 1998), workers’ disheartenment when their work’s meaning is threatened, demonstrates that work remains part of people’s sense of self (McDowell, 2009; Rathzel et al., 2014). That this feeling was *shared* was important in workers finding common interests.

e. Financialisation as a scorched earth policy

Above, I showed that workers held that the strategy implemented by ST's senior management threatened their sites' autonomy and ST's industrial secrets and decreased their desire to "give" to the company. These critiques fed into workers creating a broader discourse which portrayed ST's financialisation as not just harming their working conditions in the *present*, but also threatening ST's *future existence*. They shifted the scale and temporal scope of the issue from their individual experiences to their company's future. In narrating the past, workers contrasted the vision of ST *as an industry* versus ST *as a financially driven company*, and argued that the latter threatened the former. In a context where narratives are key to a company's ability to maximise shareholder value, workers produced a competing story, which stressed the conflicting interests between workers and senior management and created space for an industrial alternative to the fabled strategy embraced by ST's management team. The creation of this discourse by workers, I argue, demonstrates an instance of agency.

Interviewees argued that all the changes in ST's policies and practices mentioned above represented a shift towards a short-term outlook. Baptiste explained that starting in the 2000s, "[We felt that] the long-term strategy was weakened and [that] we were increasingly [operating] in the short term." Otto echoed this critique: "We felt that [...] we had to encourage activities with short-term profits rather than a long-term vision." Workers held that declining investment signified management's embrace of a fabled strategy (notes, January 2016; September 2017). Madeleine complained, "[ST] isn't an industry [anymore]. We have fewer and fewer fabs, I'm sure if they could get rid of fabs they would do it!" The strategy, crucially, was followed by *industrial* consequences. Charles explained,

ST, which previously had large investments, has slowed down. This means that in [terms of] its 'cash' levels, the company continues to sell [products] and [thus] to produce 'cash.' That's [the result of] the depreciation of past investments, but, they aren't using the profits from this depreciation to reinvest, or less so. As a result, ST is de-industrialising in a way. This isn't visible yet in terms of jobs, but it might become a risk in the future [...] but cash is there. So [ST] can pay dividends because they are investing less than before.

Charles' comment posits that the "current"⁸⁷ decrease in investment is not threatening because, given the depreciation of invested fixed capital, fabs are profitable. Yet, since in the semiconductor industry, "you can't have technological delays, otherwise [you're] dead!" (CGT, 2017b), the question is whether fabs will *continue* to be profitable. By diverting its income towards dividends and not investing *now*, ST might foreclose its industrial future *later*, or so workers feared, and this anxiety fed into a powerful narrative of finance versus industry, along with the personal and everyday consequences I analysed above.

When I visited engineers in Grenoble, they joked that ST was an "entreprise pré-siderurgique" (notes March, 2017). This means a pre-steel company and is a pun on "pré-historique" or pre-historical. Through this pun, they indicate their anxiety that ST will follow the fate of the steel industry, which shut down most of their production sites in Europe. In Italy, Giuseppe remarked, "the investments now [in 2018-19] are good, but what's crazy is that they didn't invest for 10 years before..." (notes, February 2019). This temporal threat interacts with *spatial* characteristics. Not all sites can secure the investments needed to remain profitable. The fear that sites did not have a future came up in Rousset, Tours, and Catania, where 200-mm fabs have not been upgraded to 300-mm fabs. For instance, in Tours, Etienne wondered, "whether or not [ST] France wants to let Tours die slowly. As long as we bring them money, they are happy and in ten years' time, [Tours] will stop by itself." In Catania, Peppe argued, "Bozotti didn't do any real important investment in the production capabilities, [and] now we have a very big problem in the capacity. [...] We're behind with [customers]. Even basic investments weren't done. And now we are paying the price." Laura questioned whether:

The [Rousset] factory is condemned in the medium term, because [ST] doesn't want to invest and that there will come a moment when there won't be any products to manufacture there. Because technology moves forward and forward and if we don't have the machines or we don't become bigger, or don't change the factory to make it capable to produce new technologies, well ... one day there will be no jobs left.

Rene in Rousset similarly feared for their future:

We [in Rousset] perform really well but there are no future products for the long run. [...] Our long-term future? We see that through a 12-inch fab. [ST] told us that that was insane, that was a huge investment. [...] In the long run, we fear that Singapore will become really competitive.

⁸⁷ The interviews with Charles and Damien took place in 2017, just as ST was changing investment strategy.

Workers dreaded that the Singapore 8-inch fab would outcompete them and that Rousset would be squeezed between the rising costs of manufacturing equipment, the growing pressure to subcontract or offshore production, and lack of investments.⁸⁸ Union leaders responded differently to this threat depending upon their union affiliation. Some emphasised the importance of fabs to ST's ability to manufacture chips. CGT operators described the professional division regarding this issue:

Jo: We have spoken of the industrial future, but for the operators and technicians. Because white-collar, they know they will always be there. [...]

Rene: The [white-collar] workers tell themselves, 'We don't care, we won't lose our jobs even if the fab closes.'

In contrast, Claire, an engineer from the CFE-CGC rationalised the lack of a future for the fab in Rousset:

We're an 8-inch fab. [...] It is still going to produce for ten years. Ok so for 12-inch, that's six billion euros of investment, that's good guys [sic] [describing the CGT], but the products you will make will never finance [the investment]. So one must also accept [...] that in Rousset, one day, there will not be a fab.

For Alessandro, this was one of the key differences among the CGIL's, CGT's and CFE-CGC's visions. Whilst the former two unions believe that "ST without [blue-collar workers] is nothing," the CFE-CGC members accepted a potential fabless future. That union leaders hold conflicting opinions hammers home the importance of their ideologies, with clear links to the makeup of their members. Different unions imagine space for different workers. These divergences regarding workers' sense of the future also show the precarious nature of the above mentioned common interest.

Declining investment was threatening for back-end production and R&D sites as well, or so some union leaders claimed. In Malta, Christopher explained, "basically, if you don't have new production lines, new techniques, you will dry up and be overrun by competition." In Morocco, Choukri said,

We're conscious that there is a problem of investment [...] [We work] with some products from the 1960s-70s, but one day or another we will lose them. They will be replaced by new technology, and then we

⁸⁸ Mr. Chery (2017), ST's CEO, explained that the Rousset site is now "saturated at 100% in terms of its capacity [focussing] on micro-controllers." What this means for its future is not clear: as the Rennes story showed, a depreciated fab is very profitable in the short-term, but its long-term future is compromised.

don't have a share of the market. [...] We have to create new products to replace the old ones.

Choukri thus recognised that a lack of investment resulted in a lack of new products, and given that current products would soon become obsolete, the future was uncertain. When I saw them in 2017, after ST's investment profile had changed, Malaysian union representatives believed that the company was good for another 30 years and were reassured by current expansion plans (notes, July 2017). In France and Italy, CGT and CGIL union leaders criticised the successive closures of several R&D departments and the resulting decreased capacity to design chips. Even in Crolles2 – ST's most advanced site – workers complained that “no advanced technology is produced, [because] most teams from advanced products were fired” (notes, September 2017). Alessandro believed that ST was losing its cutting edge and relied on old technology, explaining they had “a fantastic 2017” because they had found a new application for an old technology, but given the simplicity of this technology, they would “not have a fantastic 2018 because we're still working on old-fashioned technologies.” Etienne expressed similar regrets: “[In Tours] we stay on old products.” He added, “Maybe this is going to change, but there was a long period where the only products we produced were copied from competitors [...] when before, we were number one on quite a few products.” As such, workers suggested that ST's financialisation led to a scorched earth policy: the enabling of fast returns and extraction of value now, they argued, harmed ST's industrial and R&D capacities and by extension, its back-end activities, and threatened ST's future existence. Workers stressed that this threat was both uneven *and* globally menacing, though not all were equally vocal in their assessment of this threat, since on a medium-term basis, it was the future viability of *some* sites and jobs which was at stake.

The workers' words demonstrate that they politicised their experiences. Not only did they correlate ST's changing practices with the dominance of financial interests, but also they *reframed* the processes they went through, as symbolic of a systemic issue which harmed their company's ability to remain competitive. In doing so, blue- and white-collar workers suggested they shared an interest in fighting for an industrial vision, and identified points of antagonism between themselves and ST's senior managers. Notably, for white-collar workers, this meant resisting the corporate messaging that encouraged them to identify with management's vision. As Cushen (2013) notes, workers are baffled by changes that do not even seek to secure their company's growth. Scott (1985), in his study of peasants' resistance to the changes in their social relations, argues that they used the very values of the previous

hegemony to voice their complaints. He argues, “The ideology formulated by the ruling class to justify its own rule provided much of the symbolic raw material from which the most demeaning critique could be devised and sustained” (p.339). Cousin and Mispelblom Beyer (2011) similarly argue that white-collar workers’ belief in work may lead them to contest corporate choices, on the basis that they do not follow strategic principles. The frustration workers expressed suggest this posture: workers condemned ST’s financialised strategy “in the name of the work they need to do and of what they believe it entails” (Cousin and Mispelblom Beyer, 2011, p.49). This frustration is interesting because it shows white-collar workers criticising ST’s strategy for its poor management. They also spoke of “we,” claiming their company’s trajectory as their own. In Chapter 6, I described how ST sought to encourage workers to embrace its goals. Here, the double-edged consequences of this request becomes apparent, as workers felt emboldened to have a say regarding ST’s strategy, and used corporate values to criticise Mr. Bozotti’s choices on their own terms.

f. Scripting the past

Lastly, throughout their criticisms, workers spoke about selected memories of their time in ST, which served as a foundation to criticise ST’s financialisation and *personalised* the changes they noticed as reflecting the change in ST’s senior management team. These strategies strengthened their critiques of financialisation and suggested that alternatives existed. Laura said,

It’s interesting to correlate [Bozotti’s arrival] with [a graph examining investment]. It’s huge. From 2007-08 there is a drop in investment... And this [graph examining total workforce] as well [...] Bozotti arrives and *pooomm* it goes down. [...] In a company like ST, it isn’t because the CEO changes that the Gross Revenue will change. [...] There is a lag of 3-4 years, which corresponds to the development of new products. So the impact is there. Bozotti arrives, we stop [investments], we live on [past] developments.

Interviewees unabashedly contrasted Mr Pistorio with Mr Bozotti. In their accounts, Mr. Pistorio was a colourful character who cared for the work and workers, “He was a Sicilian with a moustache who smoked a cigar [...] who had an exceptional aura in all the sites. [...] He would go see the receptionist and ask, ‘How are you?’ He was someone who knew the machines.” (Damien) Massoud recalled, “Pistorio, we saw him every year, [...] he spoke to people, met with them, listened to them. He asked to meet with operators, technicians, etc., to understand.” Aya remembered, “There was no intermediary between the workers and him, he was in the field, he

talked to us, he knew us.” In their recollections, Pistorio not only listened to them, but also was driven by an exciting vision. “He was a visionary” (Balthazard), who “had an industrial vision, that is, to prepare for the future, new products, to invest in fabs and in people” (Louis). He had an “ambition to bring ST to a certain level [...] [rather than] looking at how much gross income we are going to do next quarter” (Jean). By contrast, Massoud complained, “Bozotti, we’ve never seen him, just once when Bouskoura started.” Alexandre claimed, “Bozotti barely comes to Grenoble, and when he does, he only speaks with managers... His specialty is the conference call lathered with technical words.” Workers’ positive recollections of Mr. Pistorio stress their desire for an industrial vision and for a management style that values and recognises their contributions.

These reflections matter for two reasons. First, in a more *structural* sense, they illustrate the importance of managers to the shape, strategy and vision of a company (Schoenberger, 2001) and confirm Froud et al.’s (2000) and Cushen’s (2013) argument that senior executives have some autonomy regarding a company’s adaptation to financialisation’s pressures. Why Mr. Bozotti’s team *chose* to privilege shareholders’ interest is unclear, since I showed that, according to workers, strategies to maximise shareholder value endangered the long-term interests of the principal shareholders. This points to the contradictory interests that arise from the French and Italian states’ different roles. These states are shareholders, wanting to maximise profits. As Laura noted, they “share a third of the dividends...So for them maybe they think, ‘Oh let’s get returns this year and we will see next year’.” However, they are also nation-states, with enduring (albeit irregularly enacted) strategic interests in safeguarding their semiconductor champion, as demonstrated by the regular subsidies provided to ST. In this contradiction, I show in Chapter 8, lay a source of coalitional power for unions.

Second, on a *strategic* level, interviewees focussed on management’s self-interested stance rather than on broader pressures. Scholars suggest that managers choose to perform practices which please investors and raise stock prices because, increasingly, their income takes the form of stock options and, therefore, is tied to firms’ financial value (Boyer, 2005; Chambost, 2013; Fligstein and Shin, 2007; Thompson, 2013). ST introduced a stock option program in the 2000s (Balas, 2009, p.209), which led workers to suspect such a collusion of interest. Madeleine observed, “Today we have a CEO who cares more about the shares than the company, because he is a shareholder. [...] If they sabotage the company, they don’t care, they still have cash flowing in.” Samuel agreed, “All the guys [sic] of the board, they just look at the

dividends, what they will make, Bozotti's golden parachute. The guys [sic] kill the company and they don't care."

Workers narrated that the shift from an industrial strategy to a financialised one was correlated to specific people, a rhetorical decision which was strategic, whether or not workers realised it. A discourse that stresses the compulsion of competition and pressures from intangible financial markets does not allow for reachable alternatives. Instead, workers suggested that ST's financialisation resulted from the choices of specific and self-interested managers, and thus could be *changed*. Scott (1985, p.178) emphasises the power of memory, showing that people may create a remembered past, that "can serve as an effective ideological backdrop against which to deplore the present." One sees a similar discourse happening in workers' recollections: they script a past which they use to criticise the present and suggest how they wish ST would be managed as *an industry driven by a vision*. Workers distinguished between Mr. Pistorio as an *industry captain* with an eye on the future and Mr. Bozotti as someone who holds to a *business accountant's* view focussed on short-term financial targets. Rene complained, "[with Bozotti], we don't really have a true industry captain who shows us a direction." Thomas argued, "ten years ago, we were still in the race and [then] there was a will to financialise the company, that is, to go from an industrial model with R&D to a model where we generate cash every three months." When I asked him to define this industrial model, he explained, "It's to not hesitate to put [in] money, [...] to take risks on some technologies, [...] to want to develop the company *for itself* and not for [shareholders] [and] to have a strategic vision and not just the vision to make + 1% each quarter." Workers collectively remember Mr Pistorio's industrial ambition, as noted by Rathzel et al. (2014, p.147), "as a way of remembering what is possible to achieve." Doing so, workers challenge the financialised outlook's domination of thinking about what is possible and show that alternatives exist.

Workers' recollections convey nostalgia for the past as they saw that Pistorio's management paid off: ST invested in new fabs; the workforce increased from 25,983 workers in 1996 (ST Annual Report, 1996, p.37) to 52,180 workers in 2007 (ST Annual Report, 2007, p.14); and ST's revenue grew from \$4.12 billion in 1996 to over \$10 billion in 2007 (ST Annual Report 2007). Alessandro explained, "[Pistorio] said. 'I'm going to work you harder and longer and in a more stressful way but I promise you that [...] in five years we will [increase employment].' The union trusted him and we got this." By contrast, under Mr. Bozotti's management, sales, income and employment decreased. I do not romanticise the industrial regime under

Mr Pistorio whose direction entailed layoffs, restructurings and closures (ST Annual Report, 2003). Rathzel et al. (2014, p.36) emphasise that “work is multi-layered and almost always includes elements of self-development, learning collectively as well as exploitation and domination.” One sees this complexity in workers’ recollections: they decry the demise of previous practices, recognising that while they were exploitative, they enabled increased employment and provided stimulating jobs.

Throughout this section, drawing on ST senior executives’ presentations, ST’s annual accounts and workers’ experiences, I demonstrated that the story of ST reveals a growing emphasis on value extraction above all else, which takes place through limiting investments, increasing constraints around spending, and increasing dividends. The company has also undergone numerous restructuring exercises and its decisions were increasingly driven by the desire to achieve attractive financial ratios. Scholars note that financialisation decreases workers’ share of overall profits and undermines workers’ power (Crotty, 2008; Guschanski & Onaran, 2018; Krippner, 2005). However, they do not describe *how* this works and the consequences to workers’ sense of self (Cushen and Thompson, 2016). Drawing on workers’ experiences, I showed that the pressure to secure shareholder value in ST destabilised white- *and* blue-collar workers’ fulfilment through work and increased their alienation from work, as they faced heightened performance pressure, lack of consideration by ST, decreased autonomy, and increased stress and precariousness.

In his classic study, Scott (1985) notes that the introduction of new relations of production broke down the interpersonal dependencies that had characterised the earlier class system: as agricultural workers became less needed following the introduction of large-scale harvesting machinery, wealthier families no longer felt obligated to take part in the previously required social rituals that ensured workers’ loyalty when labour was tight. One sees a similar phenomenon at play. As ST focussed on pleasing shareholders, the previous workplace reciprocities which ST would grant workers to ensure that they would “give,” such as recognition, security, or exciting projects, were no longer needed. Authors suggest that financialisation undermines *the conditions* necessary for workplace compromises (e.g.: training for workers or a share of the profits resulting from rising productivity), since it diverts profits towards shareholders (Clark & Macey, 2015; Cushen & Thompson, 2016; P. Thompson, 2013). ST workers suggested that a financial logic undermines companies’ very *interest* in engaging in such compromises and that this led to workers’ feeling devalued and alienated from their work. This feeling is important because it can give rise to greater indifference *and*, I argued, potentially, remind

workers, and specifically, white-collar workers that, at the end of the day, they remain employed by a corporation, and thus vulnerable to its whims.

Indeed, I also showed that ST workers *politicised* their experiences. Scott (1985, p.317) argues that “a hegemonic ideology must, by definition, represent an idealization, which therefore inevitably creates the contradictions that permit it to be criticized *in its own terms*.” Whilst literature emphasises the narrative elements in the performance of financialisation, there is little analysis of how workers *resist* this ideology. Though Cushen (2013) or Chambost (2013) show resentful workers, these studies portray them as powerless in the face of a financialised ideology. Here, I show that workers clearly articulated the contradictions produced by a financialised outlook and the likely long-term consequences for ST. They used these contradictions along with corporate values, such as growth or development, to create a politicising discourse contrasting an industrial strategy with a financialised one, with consequences for individuals’ work *and* the company’s future. Interviewees argued that their individual and collective *interests* were under threat; outlined the *issue*, namely that the short-term financialised strategy threatened front-end and back-end activities; and defined its *cause*, a self-seeking management team. Workers refused to accept the company’s future as seen by management, and acknowledged their vulnerability and their interest in changing the situation. Further, they debunked the narrative which maintained that management held ST’s best interest at heart, asserting in contrast, that it aimed to squeeze value out of *all* workers. Their discourse defined an “us” – workers who care about their work *and* the company across professions and sites – versus a “them” – managers who care about their income above all. Lastly, workers evoked a feeling of righteousness, narrating ST’s *raison d’être* to be an industry, which produces chips not just cash. Throughout this reframing work, workers drafted the normative vision by which workers could recognise a common interest deriving from their positive identity as producers and their shared antagonism towards management. Whilst workers’ frustration cut across blue- and white-collar categories, it was spatially uneven: Moroccan unionists recognised the dangers caused by ST’s financialisation, but Malaysian and Maltese ones mainly spoke about growing pressure to be productive and did not link this to a financialised strategy. I show next that this discourse fuelled a campaign against ST’s financialisation where unions were able to bypass some of their divisions and act together locally and internationally, even if these spatial variations remained.

Conclusion:

In analysing the workplace impacts of financialisation, I intended to connect the broad phenomenon of financialisation with its concrete corporate consequences (see Aalbers, 2015) and provide a sense of *how* financialisation is diffused in companies (see Cushen and Thompson, 2016). I showed how financialisation seeped into many aspects of ST's day-to-day business practices, instilling a sense of there-is-no-alternative and continuing apace, despite undermining the (complex) interests of shareholders. Whilst Christophers (2015) argues that scholars need to use the concept of financialisation carefully because of its numerous meanings and limits, I suggest that this concept is precisely the term needed to describe ST's transformation towards heightened value extraction and the rising sense of precariousness, stress and alienation, which workers described. This term matters, I argue, because it connects broader economic processes with specific workplace changes, which whilst they resemble previous trends towards heightened productivity pressures are geared towards specific goals, namely achieving attractive financial ratios, rather than earlier "productive" goals, and impact *both* blue- and white-collar workers.

Furthermore, the term matters because it provided a powerful concept for workers to delegitimise and contest the changes they witnessed, and resist the financialised perspective, which sees enterprises as "bundles of assets to be reconfigured with the goal of maximizing financial returns – whether or not they create jobs, sustainable organizations, innovation or long-term growth" (Batt, 2012, p.69). Workers built a powerful critique of financialisation, arguing that the focus on generating shareholder value had two distinct but interrelated impacts. First, it impaired the means of production, threatened ST's industrial secrets and its ability to respond to clients and, according to workers, made no *strategic* sense. Second, it compromised workers' creativity and the meaning of their work, whilst increasing their sense of precariousness and stress. Workers drew on corporate goals – competitiveness, creativity, adequate means of production – to dismiss the fables scenario envisioned as ultimately leading to ST's demise and they strategically narrated the past to put forward an industrial vision for ST's future. This shows how workers' positionalities, identities, here their producer pride, and their temporal contexts, here their memories but also their fears for the future, can act as tools to create a political narrative, which can then act as the basis of unions' building intra-union power, that is common interests across the workforce.

ST workers described a sense of vulnerability shared by blue and white-collar workers, though this was mediated by their unions' stance, as well as rising alienation from their work. This experience and this narrative are important because they both suggest common experiences across sites and workforces and a common interest, i.e. to stop ST's financialised strategy. In suggesting common feelings across interviewees, I am not endorsing another meta-narrative according to which financialisation will herald the recognition of a universal experience of alienation from work and from their worldwide resistance. However, the story of ST workers suggests that, whilst the "self-actualising fiction" of financialised strategies may convince investors, it also holds dialectical consequences. Whilst it works to disempower workers – both in their working conditions given rising precarity and alienation and through believing value production stems from streams of rent and ownership of IP rights rather than through ongoing work – it may also sow the seeds of a backlash from workers. If fiction is the reality of finance, then interviewed workers offer another fiction reframing the processes they saw through a political narrative, defining an "us" and "them" and the conflict between the two, and desiring another way to organise their company. The political narrative created in this instance gave grounds for workers to recognise common interests. Whilst they have less power than management to diffuse their story, I show next how Italian unions fought against the spinoff of the memory division, and in Chapter 8 how the critique of financialisation on business terms became crucial to unions' 2015-16 campaign, bringing unions and workforces to campaign together across their divisions.

Interlude 3:

Fighting for the memory division

In 2007, ST initiated conversations with Intel regarding the creation of a joint venture encompassing ST's Italian flash memory division and Intel's memory department. ST would contribute 4,100 employees and \$2.4 billion to the joint venture (ST CSR Report, 2007, p.24). The business was made official in March 2008 under the name Numonyx, and, according to ST's then chief finance director, it represented a "further step in executing [ST's] strategy towards a focused and less capital-intensive business model" (ST, 2010), i.e. the fables strategy described above. Numonyx was sold to Micron in 2010. Crucially, workers suspected that Micron bought Numonyx for no other reason than to "[acquire] the intellectual patents," which Numonyx had developed, and that it "wasn't interested in people" (Maria). Rosa agreed. "Once [Micron] obtained the licences, the pattern, the knowledge, they weren't interested in staff," she said. Soon after, in 2013, Micron announced that it would fire over 400 workers in Milan and Catania (Giornale di Sicilia, 2014), confirming workers' suspicions. For Maria, this was when ST's "financialised history" began, since before, "it was an industrial story."

The ST Italian unions waged a successful two-year long campaign for ST to reinstate the workers, purposefully ignoring that Micron was in fact the workers' employer. Rather, ST's and Micron's unions dismissed the ST-Micron distinction as not based on their experience: workers who had shared the same offices, still felt part of the same workforce community and acted as one. Alessandro said,

[Through the union], we tried to keep some personal relationship between the memory department and other [divisions in ST], to try to act as a single company even if we were two separate companies. [...] [We held that] Numonyx was nothing more than ST's memory [division]. We were one trade union group split in two. We kept acting as one block.



Picture: “Micron No to the plans to flee, Yes to the industrial plans. No to the desertification of Agrate’s industries” from (Olivetti, 2014)

Peppe believed that three key things ensured the unions’ victory:

[First] we were able to understand how a big international company [...] worked. [By doing so], we were able to [deconstruct] what they said [when meeting with ministers]. [...] The second [thing] was the human approach. [...] [Micron workers] were former colleagues from ST. They were in a different company, but most of us had close relationships with [them]. [...] This helped us to build a human relationship.

This second factor led ST workers to stand in solidarity with Micron workers, when Micron workers organised strikes. Peppe remembered when Micron “colleagues” picketed the entrance to the ST site in Catania. Previously some ST workers had ignored Micron workers’ issues “because they thought it was Micron’s own problem,” but that day, they could not cross the picket line:

They met their former colleagues. They had worked with them, some of them were people they would meet in the evenings [socially]. [...] [The encounter] was very strong for them, they were not able to go inside the company, to go to work. [...] In their minds and hearts, [they had] to [follow] the strike because they [couldn’t summon the] courage to look in the eyes of their former colleagues, considering that [these workers] were also [often] the wives and husbands of their colleagues. (Peppe)

Workers were able to recognise each other as part of the same community and as having responsibilities towards one another that superseded work imperatives. In Milan, workers organised strikes, as well as a flash mob, wearing hi-vis vests in the canteen to demonstrate the high number of workers under threat (Guila). The third factor, according to Peppe, was the unions’ use of media. When workers organised strikes, “the television was there, papers were here. This was a very big problem for

ST” (Peppe). Alessandro said, “We [the unions] announced to mass media before [Micron’s announcement] that this [layoff] was going to happen and then it actually happened. [...] So everybody realised [that ST’s spinning off of Numonyx] was a fake plan.” The unions thus kept ST accountable for the Micron workers’ fate, claiming that ST had created Numonyx to disguise potential layoff decisions. Additionally, the unions decried that Micron had “pillaged” the country’s resources, i.e., its IPs, and reported positive returns (Giornale di Sicilia, 2014) and emphasised Micron and ST’s territorial and national significance (Salerno, 2014). This way of framing the issue was “a very big problem for ST” (Peppe). Following the coordinated strikes in Catania and Milan, along with the strong media coverage they received, unions were able to meet ST management representatives and Italian government representatives in Rome. There, Valentino remembered, public representatives challenged ST’s decision, asking ““What are you doing with this public money? [...] We will not allow you to do this.”” These pressures led ST to agree to a plan to reinstate some of Micron’s Italian workers, and Micron to offer the others advantageous severance packages, retraining plans, and positions in offices elsewhere (Fisascat, 2014).

The trajectory of Numonyx epitomises the financial outlook I analysed above: workers are seen as superfluous to value, which is instead understood as the possession of IPs, whilst the desire to reduce costs means that the future value workers could produce is dismissed in favour of “cutting costs” now. This story saw engineers come to understand the threat of a financialised outlook and the need to fight for their jobs and saw unions rally around a discourse of ST’s significance and draw on public representatives’ power to save workers from layoffs. It served as a warning to what could happen to joint venture employees, a warning which French unions took seriously when ST and Ericsson merged their digital processes (notes, June 2018). However, the fight stayed within Italy’s borders and did not challenge ST’s broader financialised outlook, which the next campaign did.

Chapter 8:

“All together for a change of strategy”

In 2015, French and Italian unions, later joined by Malaysian and Moroccan unions, launched a campaign to confront ST’s decision to lay off 1,600 digital workers. Unions made this decision the symbol of the broader financialised vision driving ST’s management. As a result of the campaign, threatened French workers secured a generous redundancy plan – workers elsewhere were not as fortunate – and ST’s management announced a 40% reduction in dividends along with greater investments in ST’s production facilities (ST, 2016), the two latter decisions answering, in part, the criticism unions levelled against ST’s financialisation.⁸⁹ I show that unions used the discourse of “finance versus industry” to drive their campaign, contrasting the high dividends paid by ST with its lack of capital investments despite its receiving large amounts of public funding. Unions put forward a vision of ST as a *strategic industry* and argued that, given the French and Italian states’ longstanding power over ST, they should act to protect ST’s industrial character from its managers’ financialised ambitions. Unions reinvigorated existing political networks with stakes in ST’s survival, activating sources of institutional power whilst linking up unions internationally through ReAct to create coalitional power. This discussion demonstrates the ways in which, even when faced with financialised pressures, workers can fight back and win, finding common interests across professions and sites. I conclude by analysing how workers’ efforts to save the company from the contradictions of financialisation speak to Herod’s (2003, 1997) notion of the “labour fix,” in order to further understand the goals of workers’ agency and the consequences of this agency.

⁸⁹ Although I focus on this campaign, ST’s financialisation and workers’ fight against it predate 2015, which meant that workers had experienced the quotidian *and* long-term consequences of financialisation. As early as the 1980s, French union documents warned of the risk of financial interests overshadowing ST (Balas, 2009). In the Interludes, I recount workers’ fight against offshoring the production in Rennes and against the layoff of Numonyx workers, both of which events were linked to financial pressures. Indeed, McCann (2013, p.239) states, “the championing of ‘shareholder value’ as the sole indicator of success and sole justification for organizational change appears to be a major driver of offshoring,” whilst Baud and Durand (2010) likewise argue that offshoring is a way to answer the pressure of shareholder value.

1. Fighting to be an industrial company

In May 2015, Mr. Bozotti told investors, “Business as usual is no longer an option [...] the losses [from the digital division] are unacceptable. This issue must be addressed and we are considering all the options” (CFE-CGC, 2015a). This announcement followed several tumultuous years of restructuring within the digital division and the closure of ST-Ericsson.⁹⁰ French unions understood the implicit threat in Mr. Bozotti’s announcement. From then on, they mobilised against the closure of the digital division. The Italian unions and EWC gradually joined these efforts. In Chapter 7, I showed the diversity of workers’ experience and the competition between unions, within and across sites. Here, I show that unionists developed a discourse which bridged workers’ divisions and brought different unions to rally behind the critique of the financialisation of ST, and the demands for an industrial strategy. Unions persuasively argued that they were fighting for the good of ST in a way that answered workers’ desire to do meaningful work and that plausible alternatives to financialisation existed.

a. Finance versus industry

Instead of the digital division’s difficulties having come about because of workers’ shortcomings as contended by ST, French unions portrayed the digital division’s predicament as an outcome of the grip of financial pressures on ST. On their blog, the CGT (2016a) argued, “With others, we demonstrated that the current crisis in ST largely goes beyond the issue of the digital division.” French unions’ declarations made the closure of the digital division the symbol of ST’s financialisation, a strategy which, they held, threatened ST’s future *tout court*. The unions thus broadened the scope of the issue to encompass ST’s excessive dividends and lack of strategy. This reflected workers’ critiques but also was a large enough threat that unions decided to bypass their divisions. In response to hearing ST’s announcement, the CGT, CFDT, CFE-CGC and l’UNSA circulated a petition among workers based on

⁹⁰ ST-Ericsson was a fables joint venture set up in 2009 that focussed on mobile phone chip design with over 8,000 workers worldwide. By 2012 there were 6,200, of which 1,700 were in France (CGT ST-Ericsson, 2012). Between 2012 and 2013, ST fired 1,700 workers and, in 2013, when ST-Ericsson was dismantled, the remaining workforce joined either ST or Ericsson (CGT ST-Ericsson, 2013). Unions had learned from the Numonyx joint venture and pushed ST to keep 51% of the shares of the joint venture, as ST’s majority control would mean that unions could then leverage the French state’s power over ST to protect French workers against layoffs (notes, June 2018).

common demands (CGT, 2015c). The petition targeted the French government with the following requests:

The abandonment of the short-term financial strategy; the return to a development strategy in all the company's divisions and the investments necessary to guarantee the future of all the sites, the technological independence [of the company] and sustained employment; and the departure [...] of the CEO and the nomination of a new executive team. (in CFDT, 2015d)

French unions subsequently presented these demands to the EWC, whose members ratified a letter which launched a ferocious critique of Mr. Bozotti's management,

Workers are under austerity policies, when Mr. Bozotti benefited from a pay rise of 258% in ten years. [...] From 1998 to 2004, ST made \$3.95 billion and distributed \$312 million in dividends; from 2005 to 2014, ST lost \$3.6 billion and distributed \$2.6 billion in dividends. Workers denounce this illegible and short-term 'strategy,' which brings ST from commercial failures to useless reorganisations. (in CGT, 2015d)

The EWC letter used language which echoed the French petition and went on to ask management to "abandon the short-term financial strategy; prioritise industrial and innovation investments; [and distribute] dividends [based on] the profits of the company rather than a guarantee [to shareholders]" (in CGT, 2015d).

Whilst this started as a French issue which the EWC supported, throughout the autumn Italian unions mobilised workers, fearing that the Italian state might sell its shares and relinquish oversight over ST (CGT, 2015e) and that ST's financialised strategy would undermine their own production capacity (CGT, 2015j). Samuel, a French leader, explained,

Italians at first didn't feel concerned [by the redundancies], it was the same in France a few years ago [during the Numonyx struggle]. But they saw the impacts, [ST] is delaying the investments in Sicily, they're not buying back a factory, they've implemented rotating forced holidays at the end of the year. So they see the convergence [of interests] here.

By December, the FIOM, FIM and UILM recognised the threat and proclaimed:

[ST should] overcome the conservative and mainly financial vision, which guides the company [...]. Instead of redefining an *industrial model*, the proposed solution is that of yet another decline in production, and the spectre of restructuring, imposed by a pathological attention to 'cost-reductions,' which, in addition to weighing ever more heavily over workers' wages, entails a constant decline in [ST's] activities. (CGT, 2015k emphasis added)

Their demands resembled the ones put forward by French unions, with an added emphasis on protecting Italy's technological autonomy (in CGT, 2015k). French and

Italian unions thus overcame their national divisions to rally behind the critique of ST's financialisation, both fearing ST's de-industrialisation and recognising a mutual interest in protecting ST's future as an industry. The unions powerfully argued that ST was under the grip of financialisation, and that it would only have a future *if it retained an industrial capacity*, framing the discursive landscape where the alternative – ST decreasing its industrial capacity – was associated with a tarnished short-term outlook. Daniele explained, “We said that if ST becomes fabless, ST will be uncompetitive and Europe will become uncompetitive.” Power is the ability to define the field of struggle: by solidifying the correlation between ST staying an industry and ST having a future, the unions' discourse shaped the parameters of the discussion and made industrial capacity the defining criterion for determining what ST's future would be.

Upholding demand for an *industrial strategy*, I claim, helped unions to address both the divisions among unions and the divisions among workers across professional categories, by stressing their shared need to protect ST. Addressing the issue of the international competition between sites, the unions demanded a change of strategy but did not specify *where* investments should happen, only that ST should “guarantee the future of all the sites [and] the technological independence [of the company]” (in CFDT, 2015d). By not locating their demands in specific places, the French and Italian unions were able to bypass the competition for investments between fabs. Their broad demands also spoke to the interests of the Moroccan union, which recognised that their site's future depended on the upgrading of ST's industrial capacity (see Chapter 6). Besides supporting common interests across unions, the critique of financialisation also helped unions to bridge the divide between blue- and white-collar workforces. Demanding that ST remain an industry answered operators' need for upgraded fabs that would secure their jobs and engineers' assessment of fabs as crucial to ST's technological competitiveness. In addition to speaking to each constituency's interests, the unions also articulated their demands in diverse ways – rallies, petition, declarations, and official meetings (see below). Given operators' and engineers' differing organising cultures, this range of tactics also provided a way for unions to involve both types of workers. The unions' emphasis on the digital division's difficulties as a symbol of a wider issue and the dichotomy they created between a short-term financial strategy and a long-term industrial one, helped to consolidate mutual interests across borders and professional occupations and framed what solutions would be considered to address ST's financialisation.

b. Caring for the business

Not only did the unions emphasise they shared common *interests*, their messaging, as I now show, also built an expanded understanding of who belonged to their “work community” and what the purpose of their work was. This messaging fostered a common *identity*, which allowed unions to increase their intra-union associational power by explaining why workers should care about other workers and how strongly the unions cared about ST’s core work of producing chips.

Communications put out by the unions during the campaign recognised the interdependence between the sites and stressed that all workers were crucial to the company’s overall health. For instance, when ST confirmed its decision to close the digital division in January 2016, dismissing 1,600 workers throughout the world, of which 430 were French (Dumoulin, 2016), the CGT denounced the redundancy plan in France and elsewhere, for resulting in a global loss of knowhow:

The large-scale layoffs, [...] in addition to being a social scandal, represent a real loss of skills. [...] Unions have underscored the huge damage to the company caused by the dismantling of teams and the suffering imposed on workers in France, India, the United States, Singapore... [...] The CGT expresses outrage that such a sabotage of workers’ labour was allowed. [This is a] scorched earth policy from top management. (CGT, 2016c)

The CGT (2017c) later lamented on its blog, “In Europe, Asia, the U.S and the Maghreb ... the stepping back [i.e., closure of the digital division] of ST translated into thousands of layoffs and in a considerable loss of substance [i.e., skills].” Raphael stressed to me that European engineers across ST had created a successful collaboration with non-European engineers, deploring the “waste” the closure of the Asian divisions represented: “It took 15 years to build a globalisation which worked and five minutes to destroy it. We had accepted [the division of labour between sites] and developed competences to work with Asian workers.” In addition to contrasting the previous long-term vision with the short-term choices favoured by Mr Bozotti, these quotes put forward a semi-managerial perspective: they criticise the decision to fire workers in Asia on the basis that it harms ST’s resources. This posture was also apparent in other interviewees’ understanding of the plans. Maurice stressed that all workers, regardless of their location, contribute to ST’ overall competitiveness:

The sites which are confronting difficulties, now [that’s] a real issue for us [in France], even regarding foreign sites. The weakening of a number of sites or even their disappearance doesn’t strengthen activities elsewhere. Those are skills which leave [ST].

Edern added that, for clients, the company was one unit, and thus, that each site depended on work done across the production chain:

There are products from Tours and Catania [...] for the same final client, so their success [in Catania] is our success. [...] If we send pieces that aren't good, or they do... it's all our ST image. I don't think the client sees a difference between Tours and Catania. They see ST products.

Harvey (2019) suggests that the high profits of semiconductor and software companies, in part, result from the transfer of value from low-wage assembly workers in the Global South to high-wage workers in the Global North. There is little way to *prove* this assertion, which rests on the fundamental Marxist assumption that all workers create *value*, which is then unequally captured. However, I have shown that ST's competitiveness, especially regarding front-end activities, depends on the challenge of achieving economies of scale and that off-shoring R&D activities has been an answer to remain competitive. Thus, French and Italian sites *depend* on some activities being off-shored, which workers recognised above when they spoke of the disappearance of sites weakening ST. Further, as Edern suggested, ST's products transit through different sites, and thus, products' overall costs and quality reflect each site's productivity and developed knowhow. Workers and union communications drew on an alternative management stance, conveying that they cared for ST's business and this meant caring for all sites, since sites were interdependent. Herod (2003b, p.509) argues that "whatever else it may be, international solidarity is a process of opening up the landscape and making the spatial connections between workers in different parts of the world visible." The quotes presented suggest that union leaders made these connections. They recognised the interdependence of sites, and from there, tried to encourage a pragmatic internationalism, founded on a common need for a *global* change of strategy.

The adoption of this alternative managerial stance by unions had another impact: it gave legitimacy to their argument that alternative strategies existed. In their declarations, the unions drew on workers' knowledge of the business to highlight market opportunities to stop ST's spiralling decline. For instance, the CFDT (2015e) claimed that "new markets are already characterised by 3D printing, robotics [...] the Internet of Things [etc.]. [...] ST needs to suggest innovative solutions to these new domains to remain a leader of high tech" and asked that ST implement "a change in the governance and piloting of innovation" (CFDT, 2015g). In a similar vein, with

the stated aim of regaining workers' trust, the CFDT (2015g) called on ST to give more credence to workers' judgement, whilst the CFE-CGC Crolles (2015) declared,

ST has everything to bounce back: the resources, the human knowhow and the product portfolio. All this could enable ST to better position itself in attractive markets, such as the Internet of Things or the smart car. We need to [...] have a *long-term vision*, which would *break the silos*, created by the current [digital/automotive organisation], *encourage cooperation between divisions*, and orient transversal [collaboration] according to potential markets.

One sees the CFE-CGC and CFDT adopting a corporate vocabulary of “breaking silos” or “piloting innovation.” Similarly, the CGT issued business advice to ST (CGT, 2015i) speaking of the importance of various key technologies controlled by ST, and in a January 2016 letter to the Ministry of the Economy, argued, “Our colleagues – marketing and design engineers – believe it would be a significant mistake to abandon [the digital] market” (CGT, 2016a). Throughout these communications, the unions conveyed that they were pragmatic associates whose goal was to protect ST’s business, asserting that they, and their members, understood the market constraints and opportunities for ST’s products. To contest the company's scenario that portrayed closure as the only solution, they appropriated a corporate vocabulary, and assumed a reasonable white-collar expertise, contending that the problem was the management’s failure to seize market opportunities – a fixable shortcoming, rather than the company’s lack of competence. Daniele believed that the unions’ understanding of the business aspect of ST’s strategy was crucial:

If we didn’t have a strategic vision of the semiconductor industry, we would have never succeeded to defend the production in Catania, Milan or even in France. [...] If you don’t understand the strategy, you don’t have a vision for the future. [...] You leave free rein to the markets and [this] can be catastrophic for workers.

These discourses feature the unions reworking ST’s interpellation techniques, to present their solutions as equally valid as ST’s. This meant that, when interacting with MPs, they were able to suggest that credible alternatives to the current strategy existed and to undermine the hegemony of a financialised direction.

As well as giving legitimacy to their demands, unions’ emphasis that their demands would protect the company from its short-sighted management allowed them to appeal to workers’ *producer pride*. Bachet and Compin (2013, p.8) describe Molex workers’ fight against the closure of their factory by the company’s shareholders. “For workers,” they write, “the company was a means of working and creating wealth (meant as the production of goods and services). For management, the company was a simple way of creating financial returns.” ST unions’ messaging

similarly suggested that the unions were fighting for ST to remain a chip producer, rather than a vehicle to line the pockets of shareholders. In Chapter 7, I showed that dissatisfaction with the lack of recognition ran through workers' critiques of financialisation: workers had valuable insights about how to secure ST's future and were frustrated by not being able to share them. Trade union work, based on respecting workers' dignity, needs and knowledge, is premised on the belief that workers know how to improve their work, and, more broadly, how to run a company. Baptiste for instance claimed that

to look at questions regarding industrial, investment-related or technological issues and to intervene on this matter, rather than just working conditions etc. [...] [is important]. I feel that one of the roles of a union is of course to defend workers on all aspects, but at the same time to train people who can become able to manage companies.

In this instance, the unions' messaging, in putting forward workers' expertise and acting as a channel for workers to suggest solutions to redevelop ST, answered to workers' need for recognition and desire to have input into strategic decision-making. It presented workers as competent and reasonable producers fighting for a future, rather than victims.

In addition to focussing on ST as an industrial company and putting forward workers' concerns and expertise, the unions' messaging presented a clear culprit. Unions opposed their fight for the future of ST against a senior management team portrayed as self-interested. For instance, the CFE-CGC (2015b) alleged that the decision to close the digital division was driven by the desire of "certain top executives to cash in their bonus."⁹¹ These pronouncements, by personalising the force of financialisation, represented it as resulting from choices which are vulnerable to change, rather than an ungraspable natural phenomenon. Whilst this targeting added a moral element to unions' fight, there is a nuance to add regarding this tactic's effectiveness. To maintain unity across France and Italy, unionists had to focus on criticising ST's strategy, rather than just Mr. Bozotti. When the CFDT prompted a "Bozotti Fuori" or "Bozotti Out" campaign, Italian unionists read this as an attack on an Italian managing ST (notes, November 2015). Baptiste remembered that French unionists had to explain that their criticism did not target ST's CEO for being Italian but for not providing a strategic direction:

We always fought against the [France-versus-Italy] vision, saying that it isn't our problem. And we explained to our Italian comrades that the

⁹¹ They assumed that closing the digital division would increase the value of ST's shares, and thus senior executives' personal wealth.

problem isn't that [Mr. Bozotti] is Italian, he could be Singaporean, Australian, whatever, it wouldn't change the problem. The problem is the direction he gave.

Raphael concurred, noting, "The French government wants a French [CEO to take over], which is a totally stupid conversation. We need to get out of these discussions and confront the issue of global demands" (notes, January 2018).⁹² The French union leaders were thus conscious of the potential conflict over this issue and drew on their alternative management stance to suggest that the question was not the nationality of the CEO but the strategy he pushed for. The Italian unions' reaction shows that, when creating mutual interests, experiences – here past debates around the nationality of the CEO (see in Balas, 2009) – matter. Unionists had to ensure that their analysis of financialisation was effective by targeting the practices of specific managers, and sufficiently general to not prompt nationalist reflexes.

Here, I showed that the ST unions created a broad narrative which spoke to workers' experiences of financialisation and desire for an industrial vision. This narrative, I argue, increased their intra- and inter-union power, favouring the rise of greater solidarity amongst different unions and workers, who recognised that they faced a common threat and held a shared desire to secure their jobs. Further, the unions' communications, drawing on an alternative management stance, encompassed a broad vision of sites' and workers' interdependence and thus, common needs. Furthermore, they argued that they cared about ST's business goals, in contrast to a self-seeking senior management team, and emphasised the harm done by clinging to short-sighted financial targets. Their messaging drew on workers' expertise, tactically providing a way to channel workers' desires for recognition and framing financialisation as contingent rather than inescapable.

⁹² For instance, the press reported that this nationalist tension was a key reason why the nomination of a new CEO took so long (Cassini XX).

2. Creating coalitional power

Above, I argued that the ST unions tried to claim the moral high ground: they portrayed senior managers as the self-interested actors. Here, I add that the unions created a powerful narrative which provided: a convincing *analysis* of the issue, namely financialisation; its *culprits*, namely a specific management team; and its *impacts*, not only on one company but also, on local, national and European industrial development. The broad framing and emphasis on the benefits provided to the public by ST stressed the shared interests between unions and public representatives in maintaining ST's industrial character. By emphasising that their demands served the public good and protected national and European industrial sovereignty, the unions were able to leverage local MPs, who then pressured French and Italian government representatives to change ST's strategy. Whilst the Moroccan and Malaysian unions mobilised in solidarity, the campaign's choice of tactics adds nuance to how this international campaign functioned: indeed, to exert power over ST, unions chose to leverage specific states, which limited the involvement of less institutionally strong unions.

a. Leveraging public officials

Following Mr. Bozotti's announcement in May 2015, all three major French unions issued declarations, which deployed similar themes. The unions claimed that ST's development was of French and European significance, called out the high levels of dividends distributed by ST, and attempted to hold public representatives accountable for ST's fate. The CFDT (2015a) argued that closing the digital division would entail "the loss of European independence in the sector of new technology" and criticised ST's management, stating,

For the CFDT, microelectronics is an issue of strategic national sovereignty in the long run, which concerns tens of thousands of jobs and tens of billions of euros. Our representatives call for the French shareholder state to reverse [this] strategy [to introduce] real industrial perspectives.

The CFE-CGC (2015a) emphasised, "In addition to the social impact that a decision to 'solve' the issue of financial losses [of the digital division] could have, the technological independence of France and Europe is under threat." The CGT (2015f) argued, "At a moment when the digital sector is transforming industries and services, it would be incomprehensible for the French and Italian state to abandon their control over this strategic sector." The CFDT (2015f) later stressed ST's geopolitical value,

noting, “The semiconductor industry is a key sector for the strategic independence of Europe. [...] Europe cannot abandon this sector to Asian and American actors.” All three unions thus underlined the geostrategic interests at play, drawing on ST’s role in Europe’s technological independence and industrial development. In suggesting that the closure of the digital division would have ripple effects on ST as a whole, and by extension, on French and European interests, the unions broadcasted that they shared a common interest with public representatives in fighting for ST’s industrial future.

In addition, unions emphasised the potential *local* consequences of the digital division’s closure and wider deindustrialisation. Between May and October 2015, the CGT, sometimes with the CFDT, organised assemblies in front of worksites and rallies in Grenoble, through which they aimed to increase pressure on local public figures and ultimately on the French state. During the May 2015 rally, a speaker from the CGT (CGT, 2015l) requested that the préfet⁹³ “transmit their request to the government for a clear and public statement following ST’s CEO’s declaration. [...] Workers’ employment is threatened. So [are] the industrial future and the technological autonomy [of ST].” In June, at another rally, CGT activists (CGT, 2015d) declared:

The real decision makers are the French and Italian governments. [...] Microelectronics is at the heart of today’s world. Will its history resemble that of other industrial pullbacks and offshoring which destroyed local territories?

The unions suggested that, unless the French state intervened, ST, and more broadly, the semiconductor industry, would decline, drawing parallels with the history of other French industries. This analogy is important, because, since 1980, France has lost more than two million industrial jobs (Orange, 2019). However, despite the French government announcing plans in 2013 to relaunch France’s industrial prowess and create new industrial jobs, the plans, according to Ezratty (2017), often neglect hardware, i.e., semiconductor technology, despite it being the *bedrock* of other industrial development.⁹⁴ As the EWC secretary stated, “at a time when one increasingly speaks of the digital revolution, IoT etc., one shouldn’t forget the basis of this revolution, the chips themselves” (CGT, 2015e). The French unions’ messaging emphasised the industrial value of ST, both regarding a specific territory,

⁹³ The territorial representative of the government.

⁹⁴ In 2013, Mr. Hollande launched a plan to “reconquer” France’s industrial position, targeting 34 sectors of economic activity, including nanoelectronics as well as big data, smart hospitals, connected devices, augmented reality, super-calculators and cybersecurity, all of which rely on semiconductor technology (Ministere de l’Economie, 2013).

here l'Isere, and regarding France's industrial future. The key word here is strategic: unions stressed that ST would retain its *strategic* significance if it remained industrial.

In October 2015, at another rally, the CGT representatives (in CGT, 2015j) stressed, "The public funding given to the company should be given in exchange for a return to [industrial] development." In March 2016, the CGT and CFDT reiterated that without ST, Europe "would become dependent on global actors in the U.S. or China" and protested that "for several years [...] state funding went from the taxpayers' wallet to the bank accounts of ST's shareholders and senior executives" (CGT, 2016d). Brookes (2013) explains that how the scope of a conflict is defined is itself contested. By targeting local representatives and drawing attention to the large subsidies received by ST, the unions shifted the discourse away from a private issue of layoffs regarding unions and management, towards it becoming a *public* matter regarding ST's general strategy, for which public representatives should be held accountable because they gave ST subsidies, and because of ST's territorial significance.

These pressures and the ongoing relationships that union leaders had developed with local office holders in l'Isere meant that ST union leaders were able to meet with two MPs in l'Isère in June to highlight their concerns regarding ST's strategy and the threat over the digital division (CGT, 2015f), and in July, with representatives from the French and Italian governments government (CFDT, 2015f). In September, armed with the petition that had gathered more than 4,900 signatures, eight French union representatives met delegates from the French Ministry of the Economy who said that they recognised that keeping ST's industrial character was an issue of sovereignty, and that they, as shareholders, had initiated discussions with management regarding strategy (CFDT, 2015d; CGT, 2015h; Lyan, 2015). On the other side of the Alps, in October, drawing on their relationships with political parties, Italian unions arranged for the former Italian President to visit the Catania site and join them in a meeting that included Mr. Bozotti (notes, June 2018). Daniele remembered,

[We] created a lot of pressure, writing publications locally and nationally. [The President] said the industry was strategic [...] I remember Bozotti's face [upon hearing that]. He didn't like it [...] Bozotti was pushed to do something, whereas before he believed that, to do business, [ST] should have the least production possible.

As a result of unions tactics, from public rallies to petitions and regular meetings, office holders gradually came to support unions' claim that ST's strategy threatened the company's significance and industrial capacity. Local representatives, in turn,

started speaking to their governments, highlighting their concerns and asking them to draw on their shareholder power to shift ST's strategy. In October, Mr. Queyranne, the President of the Isere region, sent a letter to Mr. Macron, then minister of the economy, expressing his worries that the closure of ST "could lead to the disappearance of a strategic industry for the Grenoble ecosystem" and asking for a European-wide strategy for semiconductors, similar to the one for Airbus (Labeur, 2015). By November, three MPs from l'Isère sent a letter to Mr. Macron outlining their concerns, using language which invoked key themes of the unions' messaging. They asserted:

[ST] provides the technological foundation, which is indispensable to the development of intelligent systems, which constitute the added value of a number of industrial products. [...] The recent declaration by STMicroelectronics' CEO, which suggests a reduction, or even a step back from the digital activities in the Isere sites, has destabilised the balance of an ecosystem. [...] As MPs [in l'Isère], we wish to alert you to the social and economic impacts that a reduction in the activities of a company which represents more than 6000 direct jobs and 5 times more indirect jobs [...] would not fail to have.

In their letter, these MPs clearly articulated the threat on l'Isère's "ecosystem," mentioned the high number of jobs at stake and went on to express concern about

- The distribution of dividends to shareholders at an abnormally high level, [...]
- A level of CapEx which is way too low in this [up-market swing] period, and far lower than that of comparable companies in this capital-intensive sector, [...]
- A lack of vision and strategy in the mid- to long-term regarding the governance of the company, which has privileged the short-term, letting the annual revenue drop from \$10 billion to \$7 billion over the last ten years, when the global market experienced a 50% growth.

Their text thus reiterates key aspects of the unions' critiques, denouncing the high level of dividends, the low level of CapEx and the short-term vision driving ST and correlated the digital division's difficulties with ST's greater focus on financial targets. These similarities demonstrate the convergence that happened between unions and MPs regarding both the issue, and what should be done about it.

In December, one of these MPs, Mrs. Fioraso (2015) intervened at the national Assembly, heavily criticising ST's strategy:

The company currently suffers from a lack of strategic vision, which translates in a very insufficient level of investment. [...] I suggest that the level of dividends should be reduced, [...] in favour of targeted and strategic investments. [...] [The government should] develop a

resolutely European strategy, because the upkeep of a semiconductor sector is an issue of sovereignty and competitiveness for Europe.

The MPs, like the unions, stressed the strategic importance of ST to European industry *and*, crucially, highlighted the French state's ability to change ST's direction. Mrs. Fioraso reiterated ST's geopolitical significance when I interviewed her in 2017. She said:

[The question is] whether we [France/ Europe] want to depend on the United States or Asian countries for what constitutes the basis of any digital industry, as well as digital services, because as soon as you don't have the [technological] bedrock, you're done. You're dependent on the agenda of Asian [countries], which will always be a step ahead [...] notably for military.

She continued, explaining her disagreement with how ST was managed, and demonstrating her sense that she, and the minister, could exert oversight over ST,

[Starting in 2015], we felt that we didn't share the same vision of development [with ST]. [...] There were declarations in 2014 according to which everything was fine, and then the next day [ST] announced a restructuring plan, without layoffs, but still... So I can tell you that neither I nor [Mr. Macron] were happy. [...] I found [the level of dividends] shocking.

Her argument focussed on the senior management team's lack of strategy, rather than the threat to the digital division specifically, reflecting again the unions' analysis. Furthermore it adopted the unions' warning that financialisation was not just a threat to workers and their jobs but also to the state's "sovereignty," namely its control over industrial and military development. These interventions illustrate that MPs came to agree with the unions' assessment that the closure of the digital division resulted from ST's financialisation and threatened jobs and industrial development in l'Isère, but also, crucially, the nation-state. Whilst I showed in Prelude 1 that the state then agreed to the offshoring of the Rennes fab, one sees a different stance being adopted here. In linking ST's future to such public considerations and showing how financialisation challenged *core state interests*, unions were able to draw upon what Tattersall (2009) calls the "sword of justice" and avoid the discourse Rennes workers faced of needing to accept "market forces." By claiming that ST's industrial demise would ripple across territories, industries, and geopolitical relations, unions suggested their demands answered wider public interests, adding a moral element to their claim that ST not only *could* but *should* follow a different strategy. This sense of a public good being under threat permeated the intervention of the Isère MPs, who came to ask the government to ensure ST's industrial future. The French government, thus under growing pressures, intervened to shift ST's strategy.

b. Creating coalitional power

Along with creating coalitional power locally and supported by ReAct and me, French and Italian unions also broadened their campaign to unions located elsewhere. Under the auspices of ReAct, I called union leaders in Malaysia and Morocco to inform them of the French and Italian campaign and ask if they agreed with the critique of ST's financialisation. Unionists from Morocco and Malaysia decided to support the French and Italian unions' demands for a change of strategy (notes, March 2016). Several conference calls between the CGT, CFDT, UMT, EIEUSR, CGIL and CISL followed. All of the unions represented agreed to publish a collective text, which put forward three demands that echoed the ones pushed for by the French unions.

This led to the mobilisation spreading beyond France and Italy. In Bouskoura, the union organised a rally in April attended by over five hundred workers, and several workplace meetings during which workers discussed the campaign and assessed the demands. In Agrate, unions organised information hours and leafletting activities, which mobilised two hundred workers, and continued to mobilise their federal networks to pressure public representatives (notes, May 2016). French and Malaysian workers in Grenoble, Rousset, and Muar responded by taking photos showing solidarity, with each event gathering between ten and fifty workers (notes, April 2016). The Malaysian mobilisation was the result of the union organiser having asked semiconductor workers attending a training session to pose in solidarity (notes, May 2016). This was not an ST-specific mobilisation, and I was reminded of this lack of engagement during my visit, when few EIEUSR interviewees mentioned the picture taking (notes, July 2017). Despite this, based on French, Moroccan and Italian unionists' welcoming responses, I believe that the pictures from Malaysia led to workers feeling a sense of solidarity across borders, as this was the first time that they saw each others' actions and saw that their actions, however small, were connected by the same demands (notes, May 2016).

French activities culminated in May 2016, when the CFE-CGC, CFDT and CGT delivered a joint letter to the Ministry of Economy, which reiterated their concerns regarding ST's strategy. Moroccan and Malaysian unions decided not to pressure their management and MPs, arguing that they had little leverage over ST's global strategy (notes, April 2016). The demands put forward by the international coalition percolated up to higher political levels in France – by May 2016, Mr. Macron criticised ST's senior management team, declaring in front of the French Senate:

We have a management [team] that doesn't answer to our goals, which has uncoordinated communication and which, several times, shot its own team in the foot. [...] I think that we have not yet sufficiently lowered the dividend [...] it's a short-term logic to maintain the value [of the dividend] which objectively isn't our priority [...] when we essentially need to reinvest. (in Dumoulin, 2016)

Days later, at the company's AGM, ST announced a 40% reduction in the dividend (ST, AGM minutes 2016). The causality here is hard to prove definitively, without access to ST board meetings minutes or to company directors. Yet, given ST's strategy over prior years, I believe that this shift, in one degree or another, was a response to the pressure applied by the unions and MPs.⁹⁵ The French state continued to exert more visible oversight. A year later, in March 2017, the French president visited the Crolles worksite and hinted at negotiations being underway for the creation of a European-wide effort to support European semiconductor industries (Le Dauphine, 2017). In January 2018, ST announced new investments in Agrate (ST, confcall 2018Q4) and during ST's 2018 AGM, a new CEO was nominated (ST, AGM minutes, 2018). That these changes only came about over a long time reflects, I think, the inertia of this large corporation. Nevertheless, I believe the unions were able to shift ST's strategy, and, crucially regarding my interest in international solidarity, acted across scales to further a recognised common interest.

Faced with the threat to the jobs of many workers, unions used assemblies, rallies, and their relationships with M.Ps to put forward their demands. The campaign held MPs and government representatives accountable for this ostensibly *private* issue and stressed that they had power over ST, given the shareholder status of the French state. As Brookes (2013a, p.33) emphasises:

Success requires not only intra and inter-union coordination but also a power strategy that actually compels an employer to alter its behaviour, resulting in some benefits for members of the labour alliance. Structural, institutional, and coalitional power only achieve this result when their exercise directly impacts (or threatens to impact) something on which the employer in question depends for fulfilling its present or future material and strategic interests.

In this case, the unions effectively participated in making ST's two main shareholders, who both control and, in the case of France, substantively support ST, believe that unions' fears and demands were legitimate. These actors were then able to push ST to respond, in part, to these demands. The unions' ability to use state

⁹⁵ ST's change of strategy may have also reflected other shareholders' or senior managers' interests. However, if this was the case, it would demonstrate what made unions successful: they created mutual interests amongst a wide range of actors (Tattersall, 2009).

power over ST highlights that workers' institutional power can be heightened by the *political* significance of an industry.

That ST unions were able to participate in shifting ST's strategy demonstrates why, as encouraged by Glassman (2011), it is crucial to understand the geopolitical interests as stake within specific GPNs, not only to further the theorisation of GPNs, but also to analyse sources of workers' leverage. In addition, the campaign showcases the power which workers may create when they demonstrate that a particular company is of public relevance, and argue that this relevance *should* entail public responsibility, i.e., that the state should ensure the company's smooth development. The dichotomy between public and private matters reflects, fundamentally, an exercise of power. At the same time that neoliberal rhetoric has instilled a belief in the public that decreased public intervention in the economy is just common sense ((Massey, 2013), ST workers' fight illustrates how unions may increase their power by reconfiguring the notion of public intervention away from a neoliberal agenda and towards reinvigorating the twin notions of a public responsibility for the economy and a public ability to intervene in the economy. Whilst this was a type of global victory, in that a more industrial strategy benefitted every site, the matter of unions' uneven power and local conflicts was apparent throughout the campaign.

At the French level, the relationship between CGT and CFDT remained hard to navigate. Whilst they signed and delivered the letter together in May 2016, two CGT leaders reproached ReAct and me for pushing inter-union coordination, because in the context of the national mobilisations against the labour reforms in France, when the CFDT stood with the government, they felt the cooperation was "red washing." CFDT members could say that they were "doing stuff," when they were not mobilising on the most important issue: the labour reforms, recalling the complex scales of politics that overlapped in each decision (notes, May 2016). The CGT leaders had faced tough discussions to explain to members why this was a joint action, emphasising the action's international aspect to sidestep local issues. At the European level, French unions had more power than Italian ones, notably because French MPs were more interested in what happened to ST than Italian ones. Alessandro explained:

If you ask a thousand politicians in Rome, "What is ST?," they can tell you how much is the [ST] stock [value], [but nothing about the company]. [...] When [French union leader] picks up the phone, on the other end, he has the minister.

To underline this point, Alessandro explained that even during the Numonyx struggle, the unions, despite having asked to meet the minister of industry for three years, never met anyone higher than his “fifth secretary.”

In addition, the campaign favoured some tactics over others, and this promoted some unions’ agency over others. French and Italian unions decided to focus on building and leveraging their institutional power, rather than on organising strikes. That job cuts targeted engineers and that ST put in place local mechanisms to diffuse workers’ anger explain, in part, the French and Italian workers’ and unions’ choice to not organise strikes. Daniele, from Catania, argued, “It’s not easy to strike for a strategic vision, we [talk about financialisation] as a union and we write [about] it, but we know it doesn’t touch people’s hearts.” Financialisation’s consequences – the lack of means of production, cost cutting, intensification of work – are gradual and diffuse rather than immediate. Unless they lead to direct layoffs, such as in the case of Numonyx, Daniele argues, they are hard to grasp. This shows why the discourses which unions built to materialise financialisation’s consequences, as well as workers correlating financialised practices and their everyday work-related frustrations, were important. The decision not to strike may also reflect the unions’ strategy: strikes would not have reached the main target of unions’ demands, namely the French and Italian states. Finally, as engineers were the ones directly under threat, their organising culture, based on discussion and a reluctance to strike, might have carried the day when the unions’ tactics were planned in a context, in France, where ST offered them a generous redundancy package, in the hope of tempering their anger.⁹⁶ There were thus multiple reasons why French unions chose not to organise strikes, though this choice limited the ability of other unions to exert power in this campaign.

Whilst the UMT mobilised its members through a rally and workplace meetings, they did not stop production, which is one of the key ways workers mobilise locally. In Malaysia, EIEUSR does not have access to strong institutional and coalitional power, whether in the form of laws protecting the right to strike, or with respect to

⁹⁶ Regarding why Indian and Chinese workers chose not to strike, I was told that semiconductor companies in Noida and Bangalore blacklisted militant workers and that the local ST management had provided a replacement unit, which helped all dismissed workers to find other jobs (notes, April 2016). Both these tactics potentially diffused workers’ anger and/or deterred workers from organising. In China, following the layoff’s announcement, white-collar workers exceptionally published a picture of themselves, face hidden, behind a banner, asking for clarity regarding when their contracts finished and for decent compensation. Using ReAct’s networks, I got in touch again with mobilised workers there, who drafted a letter, which the EWC sent to management, outlining the Chinese workers’ demands. However, following this, the workers stopped all contacts. I was not able to determine whether this was because their demands had been met, because they had been fired or because they faced corporate or party pressures.

politicians committed to ST's presence, whilst its associational power remains quite weak, both in resources and ideology (see Chapter 6). Although it is not clear which tactics could have increased EIEUSR members' involvement, the choice to focus on the French and Italian states limited their ability to take part in the campaign. Further, whilst I showed that Maltese public representatives are invested in ST's survival, I also showed the relative vulnerability of the site, which potentially restricted unions' desire to enter in conflict with ST's management. They chose not to mobilise their workforce, despite, as part of the EWC, having seen the campaign develop. Thus, I argue, whether deliberate or not, the campaign's choice not to organise strikes and to focus on pressuring public authorities, privileged French and Italian unions' type of power and participated, amongst other constraints and unions' own choices, in limiting the Moroccan, Maltese and Malaysian unions' involvement.

This section demonstrates that French and Italian unions, with uneven support from Moroccan and Malaysian unions, created a powerful discourse, which brought together a range of actors behind a common interest and successfully increased unions' local and international coalitional power. This campaign suggests that, in some instances, workers can organise to resist the rhetoric of "shareholder value." Whilst Boyer (2005), Fligstein and Shin (2003) and Froud et al. (2014) focus on the agency of managers in dealing with pressures from financialisation, the experience of ST unions illustrates that workers can also shape a company's trajectory, even in financialised times. Just as scholars have criticised the early globalisation literature for theorising about the growing interconnection between places and its consequences as natural and all-encompassing, it is important to offer stories that chip away at financialisation and show its contingent nature. Whilst ST's particular characteristics raise questions about how replicable this campaign is, it provides one example of *how* unions organised internationally against the threats caused by a financialised outlook, underscoring however that each union's context, source of power and ideology also constrained their collective ability to "internationalise" this campaign. Unions in Morocco, and to a lesser extent in Malaysia, supported the campaign, yet because of the strategy chosen by others, were less able to exert power as part of the campaign.

Whilst workers built an expansive notion of "us" in order to mobilise unions from different countries to contest ST's financialised turn and Moroccan and Malaysian unions unevenly mobilised their workforces, the campaign focussed on reviving the responsibility of states to regulate corporations, drawing on public interests at the scale of specific territories, of the nation-state and of Europe. This successful state-

centric strategy presents a challenge to an “internationalist” narrative: effectively, whilst ST unions managed to temporarily avoid the national trap by fighting for global demands about ST’s strategy, this campaign achieved unions’ goals through coordinated national actions targeting two nation-states, rather than through building *international* leverage against their employer. This situation illustrates labour geographers’ argument that the internationalisation of workers’ struggles is not always the best source of leverage or tactic. This is also a result of the type of demand put forward: workers fought to change their boss and the strategy of the company, rather than to negotiate for better working conditions and benefits, thus requiring, on a tactical level, the intervention of an actor beyond the management team. By successfully arguing that financialisation threatened the territorial and geopolitical interests of the French and Italian states, the unions were then able to leverage the states’ power, heightened in this instance by their shareholding power, to achieve their demands. However, along with these state-centric tactics, the campaign was also sustained by a broad understanding of workers’ interconnectedness, based on workers’ understanding of and care for the business. This perspective provided them with a common ground to work together in the name of their company’s interest. In this tension between the scale of the tactics chosen and the scale of the campaign’s outlook lies both possibilities for greater international solidarity – where unions with more institutional and coalitional power than others can leverage their power to benefit all workers – but also temptations for unions to restrict their demands to the scale that they experience as most effective. This campaign demonstrates the need for unions to explore *all* their sources of power, to be able to distinguish between the scale of a tactic and the scale of the outlook driving it, and recalls that in neoliberal, globalising and financialised times, public office holders, at a range of scale, still have power. The question is how to ensure they wield it.

3. Building a “labour spatial fix”

Labour geography aims to centre workers’ experiences, voices and actions central to the functioning of capitalism *as it actually is* (Mitchell, 2011), and, by doing so, to contribute to the theorisation of how capitalism functions. Having demonstrated workers’ agency in their fight against ST’s financialised strategy and analysed *how* they achieved their demands, I now turn to Herod’s (1997, 2003a) notion of a “labour spatial fix,” to look at the *goals* of labour agency. Whilst Coe and Jordhus Lier (2011), define the goals of workers’ agency as to survive, cope with, or resist capitalism, they do not explore how workers’ agency participates in the reproduction of capitalism and its space, losing some of the power of the term “fix” as used in geography. In this section, I further reflect on Herod’s metaphor, to contribute to labour geography’s project of theorising workers’ role in the development of capitalism.

At this stage, it is important to assess whether the ST workers’ campaign represent a “labour spatial fix.” Herod (1997, p.26) suggested this notion to emphasise workers’ agency – “either in collaboration with or in opposition to both capital and other groups of workers” — in the production of landscapes, which are “appropriate to their own conditions and needs at particular times in particular locations” (2003a, p.16). This is a *spatial* phenomenon, with a metaphor and terminology that draws upon Harvey’s (1981; 2001; 2005; 2006) spatio-temporal fix theory. Harvey (2006) suggested the term “spatial fix” to denote the structurally necessary and ever contradictory “fixes” which capital may organize to delay – and never solve – the crises of profitability and over-accumulation which beget capitalism. Herod (1997, 2003a) argued that capital is not the only agent in such “fixes,” and that workers may also shape the geography of capitalism, stating,

Acknowledging that workers may seek to impose within the landscape their own spatial visions which can be quite different from those of capital, then, forces us to theorize how workers’ social practices are shaped by their spatial contexts and how, in turn, their spatial practices play an important role in structuring the evolving social and spatial relations of capitalism. (Herod, 2003a, p.117)

On the other hand, does workers’ influence over one *company* count as a labour fix? Labour geographers have looked at workers’ actions in a range of settings and scales. For instance, Herod (2000), Ellem (2003, 2004) and Castree (2000) focus on workers’ struggles in specific companies and Herod’s (2003a) argument draws upon wage contract negotiation and workers’ struggle in General Motors, whilst Anner’s (2009),

Bergene's (2006), Kelly's (2001) and Selwyn's (2009) studies are either based in a region or a sector. Whilst workers' struggles to shape a city's development (e.g.: Ikeler, 2011; Tufts, 1998) have clear spatial consequences, the spatial consequences of workers' struggles to achieve better working conditions are more diffuse and taken for granted rather than explicitly stated. Grounded in a relational conception of space, which considers that space is not just the inert stage of people's actions but rather the embodiment of shifting relationships between people, companies, and political representatives, I claim that workers' struggles to challenge how value is distributed in a company is also a struggle over space. In the campaign presented above, workers fought for investments in specific places and a key part of their argument was based on these territorial considerations. Furthermore, if one understands financialisation as a regime of capital accumulation which produces space in distinctive ways (see Aalberts, 2015; Crotty, 2008; Fine, 2010; Lapavistas, 2011), the ST workers' campaign, which fought for ST to remain industrial, to secure jobs and territorial development, rather than just to create profits for shareholders, I argue, represents an instance of a labour spatial fix, that is a contestation of how value is allocated and to whom.

Herod's (1997, 2003a) idea of a labour fix emphasises that, on a spatial level, workers' struggles may both further some workers' interests and undermine others' needs, something other authors call a "spatial dilemma" (Castree et al., 2004), given that people's lives are deeply spatial and that people need to survive. Whilst Herod (2003a) analyses the spatial contradictions of workers' choices, the ST workers' story also shows the duality of workers' spatial fix *in one place* (or here *company*) through *time*. There were clear *spatial dilemmas* involved in this "fix": ST's investments ended up favouring Agrate's fab where a 12-inch pilot line was announced in 2018. French union leaders still welcomed this news. Baptiste saw this new pilot line as "really good for [Italians], so there is a readjustment so that on the Italian side, they also have advanced fabs." Yet, French leaders recognised that this decision challenged their ability to cooperate and recognise a common purpose. Laura wondered if

Italian unions are going to take a back seat [in campaigning]. You have to know that if [investments] happen in Italy, it's at the expense of France and vice versa. So I feel like creating coherence across unions internationally [is complicated] given that there is always the temptation to retrench oneself behind, 'We're ok, so let's not complain [...] because if we lose [investments], it's a catastrophe, especially if others have them instead.'

The Agrate site benefited from the investment, won through the campaign whilst the future of other 200-mm fabs remained uncertain. Thus, whilst this investment was desired by everyone and recognised as globally positive, it favoured a specific workforce and potentially undermined the common interest previously built. This reinforces the importance of understanding labour's spatial fix as a lived *process*, which changes the ways in which capital is spent (and invested) but also produces its own contradictions, in terms of who benefits spatially, whose futures are secured and how a common purpose across scales can be sustained, or not.

ST workers' struggles also stress the dialectical *temporal* consequences of workers' actions. With increasing capital investment comes increasing automation and this modifies the composition of the workforce. Although on a historical scale, the increase of "dead labour" (or constant capital) curbs workers' power (Kirsch and Mitchell, 2004), this correlation is less clear in a specific firm: Morgan and Sayer (1988) thus argue that the introduction of new technology reflects the pressure of competition rather than an aim towards the disempowerment of workers. Edwards and Belanger (2008, p.297) similarly argue, "it is important to both [capital and labour] that any unit of capital continues to transform itself, for otherwise it will be swept away by the forces of competition." ST workers recognised this challenge. They campaigned for investments to secure the productivity of ST and yet growing automation also troubled them concerning the future of blue-collar jobs. In the pilot 300-mm line in Agrate, Luca explained, "You will not have any man [sic] working in it, because it will be the new generation [of fabs]." Alessandro worried that increasing capital investment – the 300-mm line costs at least €300 million – is not linked with increasing employment (notes, February 2019). Guiseppe concurred, stating, "what's crazy is that the machines are 10 times more expensive but need fewer and fewer workers." Likewise, Louis wondered about the future of blue-collar workers in Crolles given the few opportunities they have to upskill (notes, February 2019). Given the competitive pressures of capitalism, the central role of technology in them, and the intertwined aspects of production processes in ST, the victory by unions in ST produces contradictions and workers' remarks illustrate that they were aware of these. In effect, the outcome favoured the Agrate site and probably strengthened the slow displacement of blue-collar jobs. At the same time, workers recognised that they needed investments for the company to survive *tout court*. My discussion demonstrates the importance of attending to the temporal dilemmas workers may face, and illustrates the limits of organising in one corporation, when the competitive laws of capitalism continue to bring unrelenting transformation.

I last examine another aspect of Herod's (2003a) work, namely the role of workers' spatial fix in the broader development of capitalism. Whereas Harvey (2006) emphasises that spatial-temporal fixes *temporarily* solve the crises of capitalism and, at the same time, exacerbate the contradictions which future development will need to overcome, Herod does not theorise the role of a labour spatial fix in solving, or exacerbating, capitalism's crises. He focusses on agency in shaping the landscape, rather than on that agency as part of a broader process of the uneven and crisis-prone development of capitalism. Whilst I recognise that extrapolating beyond a company and its workforce stands on shaky grounds, given the issue of theorising abstract agency when workers are situated people, and employed by companies rather than by capital, here I argue that ST workers' experiences reiterate the dangers of the contradictions core to Harvey's fix notion. Furthermore, the ST campaign suggests that workers' actions, in protecting their own interests, may *also* play a role in addressing, temporarily and at their scale, the contradictions produced by a financialised, and more broadly capitalist, outlook.

On a macro-level, Harvey (2006a) understands the growing power of financial value as an example of temporal fixing, whereby through debt and its commodification, capitalism's crisis of profitability is solved temporarily, albeit pushed further in the future. He explains that the circulation of capital as shares, bonds, debts and financial products, relies notably on the exacerbated exploitation of workers *now* and the promise of their exploitation *in the future*. However, at the meso-level of a corporation, the experiences of ST workers underscore that financialisation threatens the paradoxical equilibriums which make up a corporation, that is, between adequate rates of investment in fixed capital versus shareholders' surplus; between centralisation of decision making and autonomy of innovation; between the exploitation and recognition of workers' value; and between short-term profits and a company's long-term future. ST workers suggested that the financialisation path chosen by ST would foreclose their ability to produce value in the future by destroying their company's fixed capital. *They held that they might not have a future employment*. Capitalism's financialised turn relies on workers' future production of value and yet, how financialisation takes shape may undermine workers' very ability to produce value. I found that this tension, which was crucial to workers' fears, encapsulated Harvey's abstract "fix" notion, highlighting how the pressures of financialisation, in focussing on short-term value extraction, sow the seeds of the system's next crisis and the lives potentially swept into the maelstrom.

Moreover, Offe (1985) reminds us that workers' economic dependency can lead to a paradoxical situation whereby workers are more concerned about the survival of the company than company owners themselves. In the fight above, one sees ST workers rising to defend a company against the dangers brought about by its financialised management. That workers may play such a role not only illustrates workers' actions as "less than revolutionary and [...] bound within the confines of a capitalist economic system" (Herod 1997, p.16), but also when furthering and protecting their own interests, as caught in broader contradictions and their "solving". Workers fought to protect ST from its managers, acting as a bulwark to mitigate financialisation's worst impacts, and ensure a bit more certainty for ST's longer-term future. This, I argue, is important for three reasons. First, on a practical level, it suggests that workers and unions may hold common interests with unlikely collaborators. As financialised capitalism threatens the very sources of growth that it depends upon, managers driven by a vision of companies as productive enterprises, shareholders who wish for companies to adopt long-term strategies, commentators who question whether too great of a financial focus might undermine innovation,⁹⁷ states which want to actively drive innovation, citizens, and workers who wish to retain jobs, may find mutual interests and, in these mutual interests, workers may find sources of power.

Secondly, on a theoretical level, it simply reminds one of the ongoing reliance of capitalism not only on extra-economic processes of value production and extraction, as so powerfully demonstrated by feminist literature (Gibson-Graham, 2006; Mies, 2014), but also on the action of people and here, more specifically, workers, acting from within the capitalist system, but driven by alternative visions of what this system can entail. Labour's agency, I suggest, is not just about shaping a landscape but about being more deeply caught in the complex and contradictory *processes* of capitalism's development, and notably, in my analysis, in the process-based nature of the ever-evolving "fixes" to its contradictions.

Thirdly, this point bears emphasising for what it suggests in terms of the politics of agency. Bok (2018), in her review of the evolution of the term "fix" through geography, claims that the metaphor has a certain inertia and *conservatism* to it,

⁹⁷ In 2018, the Financial Times ran a number of stories outlining the dangers of the scale of share buybacks, which amounted to \$741 billion in 2018, \$550 billion in 2017 and \$529 billion in 2016. To offer them, "companies have poured billions [...], not into productive capacity but into their own shares. The proportion of sales spent on research and development by S&P 500 companies has, meanwhile, yet to recover to pre-2008 levels." (FT, 2018). They implied that too great of a focus on share buybacks, i.e., shareholder value, curtailed companies' innovative capacity

given that it is concerned with how capitalism survives, rather than how it is disassembled. To quote: “[the fix as a metaphor’s] conservative character reinforces circular thinking, which explains why accounts of fixes tend to be repetitive and unsurprising” (Bok, 2018, p.1102). This comment, directed at three main fix theories, (which are, I acknowledge, less concerned with people than with meso- and macro-scale phenomenon), reproduces a type of condescendence, which Scott (1985) decried in Marxist literature thirty years ago. Yes, one *could* see ST workers’ effort in such a light: they want their company to survive to preserve their jobs and ways of life. They are not fighting an abstraction or striving for a revolution and they focus on other people as the culprits, based on past experiences. This “modest” aspect of workers’ struggles is core to Scott’s (1985, p.348) study of Sedaka peasants, where he claims

[Resistance begins] close to the ground, rooted firmly in the homely but meaningful realities of daily experience. The enemies are not impersonal historical forces but real people. That is, they are seen as actors responsible for their own actions and not as bearers of abstractions. The values resisters are defending are equally near at hand and familiar. Their point of departure is the practices and norms that have proven effective in the past and appear to offer some promise of reducing or reversing the losses they suffer. The goals of resistance are as modest as its values. The poor strive to gain work, land, and income; they are not aiming at large historical abstractions.

Both Scott (1985) and Katz (2006) stress a fundamental idea, namely that agency is about a *process* based in quotidian realities and needs rather than based in a revolutionary consciousness. When people assert their right to survive, work and live with their needs for dignity, respect and recognition met, they resist capitalism’s extraction of value and exploitation of people *now* and this may support them to organise to change capitalism *later*. When Bok (2018) suggests that the metaphor of the fix is conservative, she misses the people who are behind the deployment of such fixes and the potential agency, both now and in the future, such instances represent. Attention to workers’ agency demonstrates that the shaping of a company, but also the shaping of its crises and potential solutions, are *contested* and that, sometimes, in some places, people may win temporarily. Labour spatial fixes are lived processes, fraught with tensions and less-than-revolutionary, and yet, I believe, crucial to the shaping of the world in a more humane way, and should, as such, continue to be studied and encouraged.

Conclusion:

In this chapter, I analysed unions' struggle to stop the layoff of 1,600 workers. The success of this grassroots campaign supports scholars' claims that to sustain international collaboration, union activists need to draw on shared experiences, identify a common threat, organise regular interactions, and encourage active struggle (Antentas, 2015; Cumbers, Routledge, et al., 2008; Hennebert, 2010; Kay, 2005). I showed that the clear narrative crafted by ST unions enabled them to develop intra- and inter-union power. French unions made the company's move a symbol of ST's financialisation, widening the scope of this threat to ST's entire future. Significantly, I argued that the discourse that said "ST is being financialised" was *effective* in helping workers' politicise their experiences, whilst it brought unions in other countries to recognise a common interest in tackling financialisation and campaigning for ST to re-embrace an industrial vision. At the same time, involved unions proposed a global vision of their company and put forward demands that would, in broad strokes, benefit all workers, whether blue- or white-collar and wherever they were located, that targeted clear culprits and that drew upon workers' producer pride and knowledge. Jean sums up nicely why this discourse was powerful in creating a common interest despite all the differences encompassed in ST, saying

You know, it's already so hard to make people move for something on their own site, people who work side-by-side, so you can imagine how much harder, it is to move people around the world. There's that, and then, the need to find common interests. It's hard [looking at] wage [claims], since you are confronted with each country's level of life. [...] Where one might be able to create links is on stuff that touches upon the global future of the company.

Whilst he shows how hard it is for unions simply to *move* their workforces, he also shows *exactly* how a global threat can bring them together. By unions materialising the risk that ST's growing financialisation represented, they were able to recognise a common interest and to overcome their divisions.

In addition to persuading other unions to support their demands, French and Italian unions emphasised ST's strategic importance to French, Italian and European industrial development and geostrategic interests, thus suggesting that their demands responded to public needs. This allowed them to leverage the interests of local MPs, who then pressured their governments to change ST's overall strategy. ST unions' success demonstrates the power workers may create when they effectively expand other actors' understanding of the scope of the issue and coordinate their demands

across several places. This campaign offers ways to grasp *how* to create greater international cooperation against financialisation, even as these attempts remain bound by each union's local context, source of power and ideology, whilst the type of action chosen favours some unions' agency over others. I demonstrate the impact of such embeddedness over the longer-term attempt to build the TUN next.

Rather than an all-encompassing imposition of specific behaviours, I showed that ST's financialised practices were driven by specific people and they were contested, illustrating Thompson's (2013, p.476) remark that "there are still 'different paths or trajectories of financialisation,' in part contingent on political struggles and degrees of economic pressure." Furthermore, I suggested that pressure towards maximising shareholder value may be slowed down, not just following abstract contradictions which are structurally embedded in capitalism (Harvey, 2006) or natural limits (Christophers, 2015), but also because of workers' resistance. Workers' experiences of and campaign against financialisation adds nuance to the literature, which mostly portrays workers' interaction with financialisation as *consumers*, through the pressure of debt (e.g., Garcia-Lamarca and Kaika, 2016; Hudson, 2010; Storm, 2018), rather than as *workers*, through their shifting experiences of work. This work-centred perspective is important because it provides another way to grasp the everyday manifestation of financialisation and stresses that strategically placed TNC workers have power over how financialisation plays out.

Lastly, this campaign suggests that financialisation may also foster the emergence of new processes of class resistance. Kelly (2012) defines class as a *position* in the social division of labour, a *process* of value extraction, and a *performance* of a specific identity, all of which may enable *political solidarities*. In Chapter 7, I showed that ST's financialisation prompted a renewed emphasis on the extraction of value across professions, reminding all workers of their vulnerable position as employees and prompting increased resentment and alienation across the workforce. In this chapter, I showed that these experiences, and the clear threat that workers faced, led unions to recognise a shared interest across sites and to act in solidarity with each other. Their *resistance* suggests that financialisation may not just be heralding new class relationships globally, as suggested by Martin et al. (2010), but that it may also further class formation and, potentially, struggle at the company level. In a "minor" fashion, i.e., with all the caveats mentioned throughout this chapter, I also suggest that financialisation both provides yet more tools to favour capital owners at the expense of workers' rights and recognition (*pace* Fligstein and Shin 2007), but also may prompt workers to rise up against such changes.

Chapter 9:

Solidarity from the ground up

In Chapter 4, I recounted the dilemmas that unions faced as well as the different priorities they had to juggle with building the TUN. In the chapters that followed, I analysed the factors which conditioned ST unions' varied agency at a range of scales, including the threat of financialisation, the sector's disparate capital intensity and unions' uneven power and diverse ideological stances. Here, I demonstrate how these factors, positions, and stances acted as key obstacles to the TUN members achieving their goals, though these realities, however complex and divisive, were also the ground upon which international exchanges developed.

In Section 1, I show that TUN participants embraced the sharing of information and stories as a way to demonstrate the TUN's relevance and confront ST's whipsawing abilities. Whilst unions' uneven resources, the competition within ST, and their local inter-union conflicts amidst ongoing practical difficulties, hampered these exchanges, they were crucial to initiate an alternative geography of care necessary to international solidarity. In Section 2, I demonstrate that the unions disagreed over *who* had the legitimacy to speak for the TUN, in a context where the question of which organisation "controlled" the TUN shaped its possible goals and tactics. The source of the disagreement, I argue, came from unions' diverse ideologies and their varied representations of "the international." Some union leaders saw the TUN as a distinct scale led by international actors, others understood their collective decision-making as a negotiation of positions country by country, whilst others proposed a grassroots-based network. How TUN members came to imagine the international space, in conjunction with the influence of more conservative unions, prompted the TUN to be increasingly driven by Industri'ALL's representative. This brought the TUN to settle on institutional goals and tactics, which failed to speak to workforces' needs, and thereby, was unable to sustain the blows of local realities. I conclude by claiming that the ST TUN's experience shows the pitfall of abstraction that looms over the *process* of pursuing a GFA and that, unless unions accept a measure of vulnerability, international solidarity will tend towards replicating traditional "help" models, rather than enable reciprocal and grassroots level solidarity.

1. Materialising “the international”

When I reflected back on this action-research, I found it hard to remember the modest gains that the TUN achieved in the face of the obstacles that stood in the way and the reality that the TUN’s activities stopped after four years. Yet interviewees valued its achievements, as small as they were. Maurice argued, “I’m patient. [...] Doing all this [international exchange] is useful, the small [achievements] are already loads.” Remembering his humility and the critical romanticism I speak about in my introduction, I show that data comparison, the stories of faraway colleagues and relationships between people made the TUN concrete and relevant to workers’ needs and part of their geographies of care. However, I also show how local realities overwhelmed union leaders’ time, whilst participants’ positionalities, inter-union relationships and corporate strategies kept pulling them apart, reiterating why it is crucial to analyse unions’ positionalities within a TNC as well as their stances to understand their ability to upscale their power.

a. Sharing information

Participants presented the sharing of information as the first goal and outcome of their network, valuing direct exchanges as a way to counter the imbalanced stream of information between their global employer and themselves. Arnault said, “What’s clear is that management has no interest in countries getting together on a union level, because management uses differences [between countries] to negotiate directly [with unions],” linking ST’s control over information to its whipsawing abilities. European union leaders criticised the opacity that ST maintained about their plans for all non-European sites. Although ST provided EWC members with information about its strategy and vision for front-end activities, these presentations “never gave numbers for India or China” (Arnault), whilst Emmanuelle added that “the company refuses to give information about back-end activities, saying precisely that these do not concern [the EWC], because [the EWC] are Europe-based.”⁹⁸ The company thus effectively segmented access to information, and this opacity benefited local management’s control. For instance, workers observed ST’s reporting numbers that diverged from reality, and were only able to ascertain the differences by establishing direct contacts with each other. In Rennes, Nathan noted, “We had colleagues who

⁹⁸ Even though Maltese representatives participated to the EWC and ST had to report the data for this back-end site, ST eluded questioning about other back-end sites by providing specific slides for Malta only (Emmanuelle).

went to Singapore. They realised that their numbers were not good at all. All the rejects, they piled them in bags which were not reported. They hid [the scraps].” This possibly allowed Singapore to put in more financially convincing bids than French sites for production loads. In Morocco, union leaders similarly believed that other sites rigged certain data, for example changing the reception date to improve “due delivery” indicators (notes, January 2017), whilst in Malta, Liam outlined how despite managers claiming that Chinese workers were more productive, “[Maltese] technicians who go there, checked [and realised] that in China they reported fewer workers on the machines and had unregistered workers to help” (notes, June 2016). These anecdotes highlight the significance of having access to data from other sites, given the prevailing opacity of information, within the ongoing pressure on plants to outcompete each other.

TUN members saw the building of a global view of ST’s activities as a crucial way to combat this source of corporate power. As Edern put it, “it’s a war for information, to know what happens in various continents, what happens in factories. [...] The hardest thing is that everything is cordoned off, there is nowhere where one speaks of ‘ST world’.” The UMT representative, speaking in Agrate recounted the repression that their union faced in 2010 to show how this asymmetry of information favoured ST’s narrative, i.e., that ST maintained good relationships with unions, when the reality was otherwise (notes, November 2016). When the TUN met for the second time, Alessandro clearly argued that the sharing of information was critical in the fight against ST’s divisive tactics, saying “because ST does their job and divides us, and we need to work to increase our solidarity.” Liam favourably likened the TUN to the EWC, through which the GWU had been able to learn about ST’s strategic decisions and used this knowledge to confront their local management’s narrative, saying he hoped that the TUN would provide the same level of practical and strategic information to all ST unions (notes, September 2017). Union leaders thus underlined their interest in sharing information as a way to confront ST’s whipsawing strategies. Whilst leaders upheld this goal in the abstract, they faced ongoing practical difficulties in achieving it, as ideological differences and, in back-end sites, fears over sharing information further inhibited their trust in each other.

The TUN fostered multiple occasions when unionists compared, in minute detail, their working conditions, rights and benefits. These exchanges were crucial because they helped to ground the international, which otherwise felt far from workers’ realities. Donald in Tours, for instance, at a loss when thinking about how to

encourage solidarity between workers in the abstract, zoomed in on the specific chemical which had led to a worker dying in Singapore

I really wonder how it happened, because this is a chemical we use every day. We need to know the circumstances around this, which meant that there was a death because of [product name]. That can bring people together, because we all use it. It's leverage like that, things that are common, that's how we will hook people [onto international stuff].

Attendees compared conditions across ST during site visits (for instance when a UMT representative came to the Agrate site and asked about canteen prices, holiday entitlements and safety equipment), TUN meetings, and bilateral calls. At the first TUN meeting, union representatives compared the various provisions they had for working from home, the right to be offline, paternity leave, on-call duty, how back-end shifts were organised and how overtime was calculated (notes, September 2016). At the third TUN meeting, representatives quizzed each other over variations in around safety procedures, break provisions, and bonuses (notes, February 2019).⁹⁹ At the second TUN meeting, members of the network decided to collect information from each site about social benefits, gender discrimination, and safety and security procedures, to respond to the interest in greater information exchange, and to ground the demand for the GFA in specific issues (notes, September 2017).

This exercise to formalise what had been more informal exchanges encountered a range of difficulties. There was the expected lack of time, which interviewees mentioned apologetically, torn between appreciating these international links and the demands of local commitments. Lack of time is, of course, *manufactured*: locking union leaders into ongoing negotiations related to local issues, whether intentional or not, was an effective tactic for making sure union leaders were always putting out fires rather than able to engage in the slow work of building international relationships. Collecting data was further hindered by language barriers;¹⁰⁰ technical issues prompted by the constraints of the chosen medium of communication (email,

⁹⁹ Participating in these moments was of course framed by workers' uneven positionalities, whether in terms of ease of access to visas or institutional resources. For instance, Moroccan leaders were not able to physically attend the second TUN meeting due to visa issues and Malaysian union leaders had to use their personal holidays to attend TUN meetings. Moreover, although Industri'ALL covered expenses for the Moroccan and Malaysian participants, French, Maltese and Italian delegates had to "beg" their federations or the EWC for financial support to be able to attend (interview Emmanuelle).

¹⁰⁰ Italian was the language spoken at the EWC because French and Maltese representatives spoke it relatively well, but, in terms of foreign languages, Moroccan workers preferred speaking French and Malaysian ones were more comfortable in English.

WhatsApp, phone calls);¹⁰¹ the need for union members who had the detailed knowledge necessary to make technical comparisons;¹⁰² uneven access to reliable data, as well as the different national systems reflected in each data point. Unsurprisingly, local managers also pressured unionists to favour relationships with them, rather than with “distant” union leaders. They told Malaysian leaders not to speak to French leaders because they were too aggressive (notes, October 2016), and encouraged GWU leaders not to speak to other EWC and TUN members (notes, June 2018). In the EWC, European managers put forward the “personal” argument that EWC leaders and management had good relationships, so why not continue to solve their issues through internal discussion, rather than involving an external actor, Industri’ALL (notes, November 2017). These issues, like ST’s answers to the EWC (see Chapter 4), speak of the ongoing pressures from the obvious global player, ST, to favour locally focussed perspectives so as to maintain control over the power represented by having insight into ST’s global situation.

The pressure to favour a localised remit was particularly effective in the case of back-end union leaders, whose sites are more vulnerable than front-end ones to ST’s whipsawing tactics. Liam argued that competition between back-end sites “should just be on the table, to make [this reality] clear” and to acknowledge the difficulties it prompted in terms of information sharing (notes, June 2016). Thibault explained the temptation to use international exchanges to further site-specific needs at the expense of the workers who give this information

As soon as there is a decrease in loads, one or the other [back-end sites] will take the cut. So everyone is interested in getting information from the other side of the barrier, but do [they] really want to share the information [they] have...

When I exchanged information from one site with other unions, I sometimes sensed unionists’ apprehension. My notes recount my blunder when I mentioned to Moroccan representatives that the Muar plant was recruiting and how, “sensing unease, I immediately reassure them and kick myself mentally for sharing this information” (notes, February 2019). When we first talked, Liam suspected that other union leaders would not be transparent with their data (notes, June 2016). After

¹⁰¹ For instance, to collect data, European representatives suggested using excel spreadsheets, which Malaysian representatives (having no computers) could not easily use.

¹⁰² Union leaders who were part of the international discussions did not always know the answers to technical questions. For instance, the Malaysian representatives who attended the TUN meetings were the union’s organiser and the president. Neither of whom were involved in shop floor issues and thereby unable to answer technical questions on machines, technical processes or chemicals used (notes, September 2017), whilst the engineers who were part of the TUN were often lost regarding operators’ realities and vice-versa.

two years, he still perceived that Malaysian and Moroccan union leaders had not shared data with his union, and was grateful to have data from Malta processed by the Italian representative rather than shared across the network (notes, June 2018). He believed that if the Moroccan and Malaysian unionists had access to information about Malta – where wages are approximately three times greater than wages in other back-end sites, they might use it to argue for the relocation of Maltese production to their sites. Sharing information was thus valued, but threatening. The extent of this mistrust was uneven: the UMT openly shared data and was less scared of ST's offshoring threats, having won increased benefits for its members in recent years, whilst GWU and EIEUSR leaders were more cautious. This unevenness illustrates the entanglement between unions' positionalities, corporate pressures and each union's stance, and its impact upon efforts to increase international collaboration.

ST's GPN also conditioned the interest leaders had in speaking to each other. For instance, when I asked Arnault what could be done between ST unions, he demonstrated a kind of tunnel vision focussed on R&D workers like himself, rather than operators. He answered: "If I were to meet people from India today, [we could] at least align ourselves on the strategy of the company, saying [the company] is doing well but here let's try to develop it." When I prompted him about cooperation with sites in Malaysia or Morocco, he reacted: "It isn't evident, [...] I would be keener to develop union partnerships with Asia [i.e., India] because we work a lot with them." André, another French engineer, explained, "No one knows anyone from Bouskoura, [...] it's a back-end and not everyone knows them. I went there but what works [for collaboration] is proximity, or otherwise, it's politicisation." Raphael, a French technician, indicated that front-end workers had a hard time understanding and being interested in what went on in back-end sites because "they're a world unto themselves." If I show in Chapter 5 that ST's GPN shaped the scale of the strategies chosen by unions, these reactions demonstrate how it also informed workers' trust in and their felt proximity to others.

As much as these different expectations were about positionalities, they also reflected union leaders' varied ideologies. Maurice put it simply: "the hard thing is that we don't necessarily have the same way of doing union work, [and] the same [political] orientations." For instance, Claire, criticised the TUN's discussions for being "too down-to-earth," as well as filled with blue-collar workers who spoke of strikes, rather than "fellow" white-collar workers with whom she felt she could speak about ST's wider corporate strategy. Her reaction revealed her condescendence towards blue-collar workers and unions, when she saw the role of her white-collar

union as helping ST to better conduct its business (see Chapter 6). Similarly, Thibault appreciated a transnational effort in ST if it was based on “economic issues,” that is, able to offer strategic advice to ST to improve its business. However, he doubted that other unions “would be able to make proposals.” His suspicions were somewhat confirmed when, in the third TUN meeting, a Malaysian union leader briskly criticised the CGT’s presentation of ST’s business outlook, asking, “Why do they show this? This is not for workers. I don’t know, this [information] is for managers” (notes, February 2019). The EIEUSR representative’s view of a union’s role brought him to criticise other unions for overstepping theirs and created frictions, as union leaders realised they held different visions of their roles. Disagreements over demands also revealed unions’ divergent ideologies and the tensions this produced. For instance, at the September 2017 meeting, the EIEUSR representatives did not contest ST’s practice of offering workers a bonus for chemical exposure, which shocked other union representatives who pushed for a risk-free environment (notes, September 2017). At the 2019 TUN meeting, other union leaders were startled when EIEUSR representatives did not denounce the lack of reproductive freedom for migrant workers: Alessandro wondered, “Doesn’t he see that [migrant workers] are people!” (notes, February 2019). These interactions show that what may appear as unacceptable to some union leaders may be normalised by others, and how data is never just “objective.” Faced with these clashes, union leaders realised that they did not share a common “union” culture, which further encouraged distance and mistrust, demonstrating the impact of union’s stances upon international interactions.

The importance of union leaders’ varied values was also evident in what union leaders nicknamed the “French problem.” The TUN agreed that leaders from different sites would collect data. To increase efficiency, Italian leaders pushed French unions to speak in one voice. However, French union representatives defended the need to allow disagreement over data analysis, both within each union and among unions, explaining that local and national conflicts between the French unions could not just be dismissed in the name of international solidarity. They felt that the TUN members’ insistence on having a single French voice made collecting data locally difficult and further distanced local union leaders from the TUN. Raphael explained, “It’s already hard to get them to be interested in international issues, so if, to be in the TUN, they also have to work with people they hate, it makes things really complicated, or even impossible.” In effect, these conflicts halted data collection in France. Moreover, they frustrated Italian union leaders, who were able to bypass their local and national divisions when it came to international issues and

who asked French unions to sort out their inter-union conflicts nationally rather than bring them to the international space. Meanwhile, UMT and EIEUSR leaders did not understand the stakes involved in the French conflicts (notes, September 2017). This clash, along with the anecdotes reported above, show the “nested” character of international interactions: leaders’ positionalities, stances and conflicts reverberate at the international level, where they hamper the deployment of inter-union power. Moreover, this “French problem” touches upon the fact that some union leaders imagined the international as a place where *national* leaders should speak in one voice, bypassing country-specific conflicts, whilst others understood the international as a space where *local* leaders could speak, acknowledging the disagreements between “country(wo)men.” The two visions show that the representation of the international space is contested and that *how the international is imagined* may thwart local initiatives, for instance French unions collecting data.

Given all of the issues outlined above, the role of collecting data required legitimacy, neutrality, time and trusting relationships with each union leader. At first, the TUN decided that two union leaders, whom I would support, would be responsible for collecting data for each selected topic. These representatives struggled to collect data and speak directly with each other, in a period when my health made me unavailable (notes, October 2017- February 2018). The lack of results brought Jiro to take charge. The surveys he sent also went unanswered and his approach became increasingly abstract. My notes after a call to review progress recount my growing frustration:

Jiro seems to only want to tick different boxes and asks no questions about the sites. [...] It just becomes a list of what has been done – little – and then his solution for reining this in – his involvement. He doesn’t ask people what they think and just states what he believes is good. [...] I don’t want to overemphasise my role but, by contrast, I ask questions, [...] encourage union leaders to speak to each other, [...] and lay out the ‘strategic’ decisions of to whom a report should be addressed to. [...] I’m not implying a wilful attempt to undermine the coalition, it’s just a totally different approach. He seems to follow blueprints of what to do rather than engage with the issues on unionists’ terms. I’m frustrated. I see before my eyes what I fought to build decomposing under the weight of inertia. (notes, March 2018)

Whilst my readers may find that this reaction contradicts my aim to contextualise rather than judge, I criticised the impact of his approach rather than Jiro himself based on what my thesis has hopefully demonstrated, namely that there are no blueprints for building international solidarity, apart from meticulous attempts to understand each union’s positionalities and stances. This understanding, I argue, is crucial to navigate the obstacles that unions’ realities present to international

collaboration; however Jiro's ignorance of these realities meant he was unable to work through them, bringing a growing abstraction to international efforts.

The frictions created by these varied positionalities, ideologies, and representations of "the international" space epitomise what Cumbers and Routledge (2010, p.43) call "*geographical entanglements*." These, they argued,

continue to infuse union operations, reflecting local and national interests against broader visions of solidarity. While promoting transnational labour rights is an aspiration of most union actors, this is inevitably compromised by different subject positions both within the spaces of the international labour movement and in relation to broader processes of capital accumulation.

These *entanglements* highlight the importance of embedding labour: along with simple material issues, they significantly hampered union leaders' ability to share data and open conversation at an international level. Less than ideal, they formed the actual conditions of international collaboration. I believe that understanding how these conditions interlock to produce mistrust, distance between workers and potential conflicts is key to overcoming, or at least working with, these limits. I also showed the impacts of how the international space was imagined, and the need for grounded international exchanges. I return to these issues below.

b. Caring for distant colleagues

Despite all the difficulties outlined above, in interviews workers also stressed their feelings of comradeship coming out of their shared experiences and ongoing professional relationships.¹⁰³ Daoud, a Moroccan engineer, explained, "When I see someone from Agrate, they're a colleague, we're doing the same job for ST." Massoud, another Moroccan engineer said,

ST workers are the same family. [...] I have contacts with people in Catania, Grenoble, etc. So for me it's the same thing. For example, if someone works in Catania and we work on the same product and I hear that he [sic] is going to be fired because here we're creating jobs, it'll hurt. No one can accept that. We have to stand in solidarity.

Guy, a French engineer, likewise explained "when you have someone on the phone every day, even if you have never seen them, they're colleagues. I have loads of colleagues in India, China, Singapore. [...] Those were people I had almost daily [on

¹⁰³ For instance across ST, there are pilot lines in Grenoble and Agrate, which provide the R&D for back-end processes and bring their workers regularly in touch with back-end workers. Furthermore, technicians and engineers train operators across sites as product lines are rolled out, and R&D teams collaborate across borders.

the phone].” This professional connection brought some workers to mobilise when distant colleagues were under threat, or at least, to connect with the human element of restructuring. Maurice, a French engineer, remarked, “When there are job cuts at another site and people see the consequences, given the friendly relations that they have with foreign workers, you can have positive solidarity reactions, for example a petition in solidarity.” Arnault in Le Mans remembered a layoff when

I had colleagues who were fired in India and who were crying during our team meetings, they were crying on the phone because they were losing their jobs... [...] I asked around to understand why they are so sad to lose their jobs when the discourse is that [India] is a country in an economic boom. They said that they are in a zone a little bit like Le Mans, where there are no companies nearby. If they want [another job] they have to move four hundred kilometres with their families.

Arnault’s regular contacts with Indian workers allowed him to relate to his Indian colleagues and begin to understand their difficulties. Other workers pictured distant colleagues as sharing similar experiences and need for respect. Nour, a Moroccan operator emphasised that if someone “has given a lot for ST [...] you have to recognise the time they spent for this company, these are years of their life they spent working here. It’s the human factor... you can’t [just fire them].” Choukri, a Moroccan technician, stressed the similarities between workers, noting

It’s the same. Colleagues in the Philippines, Singapore or elsewhere, they’re fighting for their rights, to have a better life, to be well paid for their efforts, to have their work recognised. They look for peace, like us [...] to live their life with dignity. [...] We fight for the same goal, we don’t want to massacre the company or the employer. We want to live in collaboration, like partners rather than slaves.

In her evaluation of internationalist feelings, Ryland (2010, p.67) argues that rather than promoting an “idealistic working-class consciousness or social praxis or identity,” it is important to look at how workers connect to each other as social beings. In these instances, workers extended their care to distant colleagues based on either their professional relationship, which bridged the geographical distance between them, or on core values such as dignity and respect, which take on a particular significance in the mouths of Moroccan workers who had to struggle for their dignity to be respected (see Appendix 6). This suggests that, whilst ST’s GPN encompasses numerous and varied contexts, it also enabled workers to connect with faraway colleagues. If the impact of workers’ positionalities above emphasises that “geography matters,” workers’ reactions also show how this geography can be mediated by another geography, built on workers’ shared work experiences,

relationships, and political narratives, however fleeting and modest these connections are.

Union leaders recognised the power of this empathy when they stressed the need for personal contacts and promoted the sharing of stories along with data comparison. For instance, Guisepe expressed how hearing about the story of the UMT's struggles against ST's discrimination had reinforced his commitment to the TUN (notes November 2016). In Agrate, after the presentation by the UMT representative and me, workers suggested setting up a Facebook page and a YouTube channel and using the unions' notice boards to periodically publish news from other sites, because they saw these stories as vital to giving the international a material reality and overcoming the distance imposed by ST (notes, November 2016). Likewise, holding that "when you meet people, it takes a material dimension, it's embodied, instead of staying just theoretical," Baptiste tried to organise bilateral site visits to confront workers' temptation to scale back to local issues and to encourage "a discourse which gives a more global vision of the world, of the working relationships at the global scale."¹⁰⁴ Laura, after the second TUN gathering, stressed that meeting people was crucial for international solidarity to feel less abstract (notes, September 2017). When a picture of Chinese workers mobilising against the 2016 restructuring plan arrived in the inbox of a French union leader and then circulated through the TUN, André argued that "seeing the Chinese workers' picture with their banner to ask for equal treatment, that had a lot of impact. Because for once, [workers] saw people." He argued that since they do not often hear from Chinese ST sites, this picture really touched people, illustrating again the importance of *seeing* other workers to connect with their plight and to care about them.

The desire for direct contact and stories led the TUN, independently of Industri'ALL and through my support, to set up a WhatsApp group, with over thirty participants, which union leaders still use to share stories, pictures and ask brief questions. I believe that this group was key to building concrete relations between union leaders, who had names, stories and voices. In addition, members of the TUN searched for ways to improve the exchange of stories, in order for workers to feel part of this international network (notes, September 2017). In this sense, the stories began to function as an alternative to the data that ST refused to circulate internationally and

¹⁰⁴ His attempt to invite Moroccan union leaders was unsuccessful because the CFE-CGC did not answer the CGT about whether they would co-host the invitation, delaying the invitation (notes, May 2017). Summer events (Ramadan and holidays) further pushed back the visit, until the focus shifted towards preparing the TUN. This failure illustrates the simple difficulties and ideological conflicts which slowed down international activities.

that unions struggled to collect. They wrote two newsletters, which they distributed to workers, who welcomed them for the stories and images they provided from across the sites (notes, September 2017). These attempts to foster ongoing exchanges of stories, pictures and direct contact represent pragmatic ways to heed Ryland's (2010) contention that the social being of workers matters to their international solidarity efforts. I believe that these simple tools helped build empathy between union leaders and workers and supported them in creating their geography of care. These are humble suggestions and they are of course not enough: I show below that inspiring goals and accessible tactics are also key.

This was one area where my research and "resourcing" approach worked together. When visiting different leaders, I always brought stories and pictures to share and worked to collect more. I recounted in Catania how the unions in Crolles had worked with a labour inspector to keep track of union leaders' career advancements, documentation which had pressured ST to stop discriminating against union leaders. This information led Catania leaders to contact the CGT for more information (notes June 2018). I prodded Guila to explain how in Agrate they had won flexible time for white-collar workers to encourage women engineers to stay in ST (notes, September 2016). I was careful to not create a unidirectional stream from European to Global South unions. For instance, the UMT leaders explained how they had equalised workers' annual bonuses across categories and achieved an agreement that all new engineer hires would be evenly distributed across gender, two victories which impressed French and Italian representatives (notes, September 2017). I emphasise this two-way circulation because, although Guillaume noted that, "we [in places with long histories of trade unionism] should learn from [unions in the Global South]," not all leaders embraced this reciprocity, and some became wary of sharing their stories.

Lucas, a representative from Agrate, thus explained that he no longer wanted to talk about their local issues with the TUN, because he felt that other leaders had latched onto one safety issue they had faced, when no one had said anything about the deaths in Singapore or Morocco (notes, May, 2017). This biased portrayal of history – union leaders had strongly reacted to these deaths – reveals a type of pride that said that they, in Italy, were "strong" enough to not need others' help and symbolises a vision of solidarity as charity, flowing from more wealthy workers to less advantaged ones. This question, whether solidarity was a reciprocal attempt to fight for everyone or charity, underlined international interactions. For instance, at the second TUN meeting, a CISL representative emphasised the need to share personal stories to

touch workers, to which a CGT representative replied that stories should not just dwell on Southern workers' misery, explaining that in France, workers also faced unfair practices, such as when disabled workers were unlawfully dismissed in Crolles (notes, September 2017). Yet, another CISL representative dismissed this story as inappropriate, holding that French workers were the most privileged of ST workers (notes, September 2017). This interaction reveals the complex balance required between recognising workers' uneven rights and benefits, and avoiding a charity posture, which echoes an older colonialist posture. As I show in Section 2, this conflict also appeared in the pursuit for the GFA: whilst some leaders emphasised the GFA to help workers in the Global South, Baptiste saw this charitable "well-meaningness" as "poison," in its emphasis on help, rather than a common struggle (notes, May 2017). In addition, the reluctance to share stories resonates with Wad's (2014, p.13) observation that creating global union networks "may cause union leaders to feel loss of 'sovereignty.'" Anderson (2012) claims that local stories and struggles are crucial to energise global networks. However, the reactions above show that enabling the sharing of stories necessitates that union leaders accept a measure of vulnerability and "need" and agree to the loss of control this sharing represents. There lies the tension in building truly reciprocal solidarity: the need for unions to desire international solidarity not only in support of others, but also for themselves. In Section 2, I also show that how unions negotiated the international's "threat" to unions' sovereignty favoured moderate unions' goals.

Holding these caveats in mind, I still encouraged the sharing of stories so the international could be embodied in people and places rather than just disseminated via the abstract notion of building power through information. By disseminating stories, I also tried to encourage a sense of the possible, gently challenging what was seen as "normal" at each site. As Wills (1998) notes, stories of distant workforces and their victories can stimulate other workers to act, showing the landscape of possible victories and reminding workers that despite ongoing pressure, they can and do win. After seeing pictures of Moroccan workers' sit-downs, Sophie, for instance, remarked that "in times when [we feel that] nothing works, for sure to hear that others decided to do something [...] which was successful, that's encouraging." Some unions drew on my visits to talk about international issues, which often got sidelined in branch conversations (notes November, 2016; February 2017; June 2018). In sharing stories, like Rathzel et al. (2013), I worked to translate the context, history and meaning of each story. As I grew more familiar with various sites and union leaders, when facilitating the exchange of information, I was able to identify when

exchanges needed to be navigated with care, whether that meant explaining why Muslim union leaders would not shake a woman's hand, the conflicts between French leaders, the Maltese representative's fears or the political difficulties that militant organising face in Malaysia. Routledge et al.'s (2006) analysis of international networks brings attention to the role of particular so-called "imagineers." They claim that these individuals, with access to material and non-material resources – mobility, linguistic abilities and knowledge of different cultural contexts – become crucial to sustaining an international network (see also Brookes, 2013; Davies, 2009; Hennebert, 2010). In my research, I came to adopt such a role. That I respected union leaders' autonomy and focussed on enabling participation rather than seeking to direct it, brought many union leaders to trust me. These trusting relationships enabled me to bridge some of the suspicion they held of each other, whilst my knowledge about each site supported my ability to translate stories in accessible language, making the international graspable and set in relationships rather than an abstract theoretical goal.

Dufour-Poirier and Levesque (2013, p.54-55) argue that unions' "perception of transnational trade unionism is grounded in and shaped by local issues and problems." Here, I showed how union leaders in ST were able to give the international a material reality and legitimacy by promoting the comparison of information and the sharing of site-based stories. This helped international interactions to be embodied in relationships and in other workers' realities, rather than in acronyms on a flyer, suggested by a faraway GUF. ST unions' efforts display, as André argued when outlining the importance of politicisation, that workers' geography of care can also be *built*. Herod (2003, p.127) defines international solidarity as "an explicit attempt to bridge space so that the interests on one group of workers can be brought to the attention of (and supported by) workers in other parts of the global economy." I showed how, when presented with the social being of their colleagues, workers extended their care towards distant others. In these practical efforts, union leaders' socio-spatial positionalities as workers in specific GPNs confronting the competition between sites and time pressures related to their work, and union representatives, in constant relationships with management, driven by different values and potentially in conflict, produced ongoing contradictions, whose negotiation was the basis *and* constraining frame of the TUN's activities. Whilst necessarily contradictory, grassroots internationalism, I believe, remains worth fighting for.

2. Building a grassroots internationalism

Whilst the TUN aimed to and did share information and stories, when unions requested Industri'ALL's support to organise the first international meeting of ST unions, they also sought to analyse the strategy of the company and to address the issue of workers' freedom of association (letter, March 2016). That the TUN came to be increasingly controlled by Industri'ALL and dominated by its goal – the GFA – and its tactics, thwarted the TUN from achieving other aims, though this shift was contested. Baptiste explained,

Industri'ALL, it's a top-down approach, but we built the TUN totally from the grassroots level, and some unions favour this [top-down approach]. Like Malta, who are really prone to discuss with management [...] when I think we should organise common petitions, actions etc., and that's how [ST] will listen to us.

In this section, I argue that union leaders feeling illegitimate at the international scale, some union and federal representatives working to undermine a grassroots outlook, and TUN members' emphasising absolute democracy led the TUN to adopt an institutional approach and pursue a toothless GFA. This abstract aim answered none of the needs of ST unions and the tactics chosen limited the power unions were able to build, leading the international to become irrelevant to workers' and unions' needs but also distant from their scale and means of power. This outcome demonstrates the importance of an international campaign that reflects workers' needs *and* the role that a TUN's internal dynamics and its members' ideologies play in the performance of a genuinely reciprocal, empowering, and grassroots internationalism.

Writing this analysis presented me with an emotional and ethical dilemma, because I genuinely respect most union leaders and struggled with writing what may appear as sharp critiques of trusting participants, who along with all their shortcomings, embodied and pushed for the TUN to exist for three years, whilst also continuously fighting for workers' rights and dignity – in various fashion – locally. Furthermore, I was involved in this experiment and it was hard to dissociate its failure from my own shortcomings. Although I continued to support cracks within the process, facilitating bilateral phone calls, questions and translation on the WhatsApp group, at the end of the day, given that I was not *democratically* accountable to ST's workforces, I also respected the path that TUN members chose.

a. Finding international legitimacy

The TUN was founded upon the efforts of CGT and UMT leaders supported by ReAct and then joined by other union leaders. Before representatives met formally in September 2016, they had taken part in multiple multinational conference calls; acted in a semi-coordinated manner to push for a change of strategy in ST; shared regular communication through a WhatsApp group; and questioned ST's global HR about laid off workers in China (see Chapter 4). At the same time, these efforts faced pressures from the union federations, whose representatives encouraged leaders to contact all unions in ST to convince Industri'ALL to get involved – as more of its affiliates were involved – rather than self-organise the first international meeting. This prompted the CGT leader to fear that the federations' involvement would lead to an ineffective international meeting, where only federal staff members would attend rather than company workers, and that inviting all unions would tamp down any action other than reaching out to management and that such participants might relay information back to the company (notes, May 2016). Apprehensive of these possible outcomes, he advocated for the TUN to carry on, largely ignoring Industri'ALL's agenda. For a while, the TUN managed to juggle these two contradictory logics, though as time went on, the grassroots-based approach was superseded by the top-down approach favoured by some unions, federations and Industri'ALL, which upheld the signing of the GFA as a “win-win” and discouraged attempts to create leverage over ST.

Key to this shift was the way Jiro increasingly became the spokesperson for the TUN. Whilst CGT leaders had welcomed Industri'ALL funding Malaysian and Moroccan leaders to attend the first TUN meeting, they grew critical of Jiro's acting in the name of the TUN, a view that, importantly, not all union leaders shared. The CISL and CGIL leaders suggested the TUN could push for the GFA through the EWC structure, because Jiro had explained that this approach had enabled other GUFs to sign GFAs (notes, November 2016). In December 2016, they invited Jiro to attend the EWC meeting, where he introduced the unions' demand for a GFA to the European HR representatives. Baptiste condemned this initiative, both for what it represented – a non-company-related person speaking for ST unions, in a space where Moroccan and Malaysian leaders had no voice – and for the content of Jiro's speech (see below) (notes, December 2016). By contrast, other union leaders welcomed Jiro's approach and, in the following year, pushed for him to take greater control.

In March 2017, evaluating how to respond to ST's refusal to discuss the GFA, CISL, GWU and EIEUSR representatives suggested that Jiro try to establish an informal conversation with ST's headquarters (notes, March 2017) and the CGIL representative agreed, adding the need for intercession by the EWC. The CFE-CGC representative, in the meantime, lobbied for other French federations to exclude ReAct from the process and for federal representatives to negotiate the GFA, deeming that federal representatives were ST's legitimate interlocutors (notes, March 2017).¹⁰⁵ CGT leaders convinced their federal representative to oppose this plan, suspecting that it was also motivated by federations' hope to be financed by ST (notes, March 2017). They emphasised that Jiro should be a means for *their* struggle, rather than directing it (notes, April 2017). The influence of an institutional vision spread. European representatives met with Jiro in May 2017 – non-European leaders and I were not involved – and decided again to focus on contacting management. Despite my concerns, I respected the leaders' autonomy and recognised the importance of the favourable business conditions in shaping this measured stance,

The fact that fabs are fully loaded and that a new CEO will soon be nominated also prevents ambitious demands from emerging. [This is exacerbated by] the paralysis that inter-union division in France brings about. And I cannot decide for workers what they should do. [...] This network follows its own rhythm, fast-paced when reacting to the death of the worker in Singapore, and then anchored down by local issues, which absorb the time, attention and imagination of union representatives (notes, June 2017).

Control continued to shift away from union leaders. During a conference call preparing for the second TUN meeting, Jiro hinted that Baptiste was overstepping his role by trying to host it and went on to impose his agenda, challenging the press conference organised by Grenoble leaders and decreasing the time allocated for issues-based discussion, thus cancelling the possibility of running thematic campaigns alongside the GFA one (notes, July 2017). At the meeting, the fight for control continued to play out over who would facilitate the day and set the TUN's goals. I sometimes stepped in, whether to ensure that Moroccan leaders could speak, or when closing the meeting by asking union leaders for feedback on their experience of, and desires for, the TUN, hoping that, if everyone spoke, they would appropriate the network as their own, rather than it delegate it to Industri' ALL (notes, September

¹⁰⁵ That CCFE-CGC members held this institutional vision was apparent during interviews. For instance, Thibault argued that he valued the TUN because, "for the first time, elected representatives from the EWC meet and 'triangulate' with experts from Industri' ALL [...] bringing in another actor is a real opportunity." He thus focussed on the international as a source of experts, rather than other union leaders.

2017). At first, TUN members agreed to organise data collection in a decentralised way, which answered to Baptiste's fear that having one TUN coordinator would make its administration a goal rather than a means (notes, October 2017). However, when the data collection exercise failed, Jiro took over facilitating the network. This failure may have strengthened the pull of institutional approaches, which in theory promised more certainty. Conference calls became more and more focussed on process rather than content, ignoring local issues, the nomination of a new CEO for ST, or the need to build relationships between leaders (notes, March, April 2018). Whilst I continued to cultivate more grassroots efforts, I was also on increasingly shaky ground, since the "appropriate" actor was now in charge, whereas my legitimacy only rested on the relationships I had developed and since most unions had approved of this shift.

These skirmishes, along with the increasing delegation of authority to Jiro, reflect the tension at the heart of imagining a grassroots internationalism. When existing institutions have the remit over the international scale, how can local leaders appropriate an international space of discussion? When ReAct and CGT leaders started to talk about increasing collaboration between unions in ST, the CGT leader remarked that "coordinating unions' activities at the international level, well there's a problem. Because there is already an institutional actor whose responsibility it is to do that. So we can't really step on their toes..." (notes, September 2015). Similarly the CFDT leader argued that although "workers should really be in control, [...] institutions want to use institutions as there are, it's logical. [...] Industri'ALL is meant for this [international interaction]." These comments and the shift within the TUN suggest that a type of "scalar territoriality" is at play, i.e., each scale has its legitimate representatives, leading representatives from one scale to feel less legitimate at another or to have to struggle for legitimacy. Interestingly, this perspective replicates the logic put forward by the company. Whilst ST refused to engage with Industri'ALL, the legitimate "international" representative, arguing that they already had sufficient discussion channels, the tensions recounted above point to a similar logic within labour structures according to which each scale has its appropriate bodies and representatives. Attempts to create new channels are thus resisted by the company, of course, *but also* by the some of the unions' own institutional structures. This was a contradiction-filled situation: federations *politically* cannot openly discourage their leaders from getting involved in international interactions and *some* federations also disagreed with the GUF's institutional approach and yet, *materially*, they all paid dues to the GUF to "deal"

with international issues – in a situation when they often lacked funds – and needed to protect their scale of power to justify their appointments.¹⁰⁶

Importantly, this was not *just* about federations: some unions, notably the more conservative ones, deferred to Industri'ALL, in part, I argue, *because they knew that Industri'ALL promoted a non-threatening approach* (see below) which suited their union culture and ideology. The differences between unions' approaches became particularly problematic because of how the international space was imagined: consensus was deemed necessary before anything could be done in the TUN's name. The CISL representative summarised this informal rule as "in the TUN, we have to be one. We can only do things that we all agree upon. We can't do it by majority rule" (notes, September 2017). This democratic impulse, whilst crucial to ensuring that unions did not use some workers' issues without them having a voice (for instance using Filipino workers' lack of freedom of association) and to answering unions' fear of a loss of sovereignty, became a way for conservative unions to thwart any action from happening. The CFE-CGC thus slowed down other French unions' attempts to distribute flyers denouncing ST management's refusal to meet with the TUN. Similarly, the TUN's rule that all French unions needed to have a unified position effectively reinforced the CFE-CGC's, and increasingly the CFDT's, ability to get in the way of data collection and initiatives in France (notes, March 2017).

This shows how respecting unions' sovereignty at the international level, in practice, can favour moderate unions, which whether for lack of interest, closeness to management, or just divergent union cultures, can then make the international follow their pace. Thus, whilst the number of unions is potentially key to activating a GUF's interest in supporting a TUN and theoretically more of them should increase their collective power, that they hold divergent and potentially conflicting stances, within a framing of the international space as ruled by consensus, meant that in practice having more unions led the international scale to be governed by the lowest common denominator. The structuring of the international space may thus in practice discourage more radical approaches, as suggested by Hauf (2017) and illustrating how the conception of a scale is always a political endeavour, underlined by

¹⁰⁶ Importantly, whilst here I show the tensions between union leaders, their federations and their GUF, this scalar challenge also confronted local leaders in how they involved workers in international efforts. Anis and Hassan, UMT leaders, thus were interested by international questions, but did not trust local workers to be interested (notes, February 2017), whilst during my visit to Muar, I realised that the EIEUSR committee had not really shared the TUN's effort with its membership and the wider workforce (notes, July 2017).

struggles, including within *labour*. This demonstrates the necessity to analyse unions' stances, not just because they may promote a self-interested internationalism (*pace* Herod, 2003a; Johns, 1998), but also because these ideologies interact with how the international space is structured. Addressing this issue, I believe, necessitates that international efforts respect a union's autonomy— to guard against local issues being exploited by other unions at the international level – but also to let unions act independently of others, within *all* the scales they belong to. This is of course politically complex, since I would feel more wary of the CFE-CGC acting at the international level than of the UMT or CGT. However the alternative, i.e., requiring consensus in practice, already allowed moderate unions to “control” the international. Lastly, I believe that these difficulties were reinforced by a paucity of the imagination regarding what grassroots-based international efforts can achieve. Local union leaders were in unfamiliar territory at the international level and somewhat at a loss in terms of what they *could* do, reinforcing the institutional actor which could seemingly offer certainty, this scale being its speciality. A federal ally of the CGT leaders explained that it was only after taking part in several Industri'ALL meetings that he became able to voice his opinions in international discussions (notes, November 2015). Laura said that she had difficulty participating in international exchanges because they took place in English, but, she added, “it's not just about language. It's the issue to dare to do something which we aren't used to doing.” Just as union leaders may benefit from hearing stories about other unions' local victories, I believe that they need more *stories* of how to imagine and practice “the international” in a grassroots-led way. This thesis tried to add one story to the many stories that need building.

My discussion of the fight to control the TUN showed that the building of a grassroots effort in ST was hindered by the “scalar territoriality” that still permeates unions' practices and representations. Cumbers and Routledge (2010) suggest that the vertical hierarchies through which the GUF they studied operated, constituted one key barrier to grassroots internationalism. I demonstrated the continued pertinence of this critique, which I extended to national federations, along with the difficulties prompted by the influence of more conservative approaches. ST unions also struggled to maintain their grassroots efforts when in practice they lacked the imagination of what to do together at the international level. My discussion restates the need to understand the varied practices and perspectives which thread through a TUN, the struggle within “labour” these differences may prompt and crucially, how the international space of discussion is governed, in order to then assess how these

struggles and representations have an impact on promoting a grassroots approach. As I next show, the approach chosen mattered not only regarding grassroots leaders' involvement but also in terms of the goals and tactics pursued, and from there, the relevance of international efforts to local workforces and unions' needs.

b. Tactics and goals, the moving sands of abstraction

In September 2016, Jiro suggested that the unions pursue a GFA. He emphasised that it would differ from a corporate Code of Conduct because it would be a negotiated agreement that covered suppliers, mentioned all fundamental labour conventions, and offered a basis for greater social dialogue between the company and existing unions (notes, September 2016). Whilst each of these points is important, they are abstract. They show a “recipe” approach to international solidarity through standardised and pre-ordained motions. None of these goals spoke to the specific experiences of workers *in ST*, apart from the desire by some unions to have more social dialogue with the company. However, achieving a GFA presented a goal that was clearly international and a seemingly easy first step to continue the international activities initiated in 2016. It also addressed ST unions' stated aim to tackle the issue of workers' freedom of association, when the other stated aim, to discuss the global strategy of ST, stumbled over the fact that not all union leaders agreed on speaking about strategy (see Chapter 6 and above). To both support the process and make it more relevant to ST workers, some TUN members and I tried to incorporate demands in the draft agreement which would materially benefit workers in ST. For instance, we suggested articles to limit the maximum weekly working hours to address the 12-hour shifts in Muar; gender equality; and additional ways to enforce workers' freedom of association (notes, November 2016).

However, the effort to “thicken” the GFA with workers' issues came up against the simple fact that national regulations, notably in Europe, were often *more* protective than a GFA, for which there are still few compliance mechanisms, would be (see McCallum and Fichter, 2015). That the GFA could not improve European workers' rights encouraged European unions to perceive it as for *others*, which fundamentally undermined its international premise. This posture became visible when the TUN agreed that Italian representatives would question HR representatives during the CSR presentation planned in Castalietto (notes, October 2016). The CISL representative emphasised that questions should not address Italian or French issues but rather focus on the situation in other countries. The CGT leader condemned this

proposal that relegated the GFA as only for “others,” holding that “‘we’ aren’t doing well at all, but no one wants to say that” (notes, October 2016), echoing the issue of union pride I mentioned above. He argued, “of course we want rights for those who don’t have any, but we need to also speak about strategy, because otherwise, within the next five years, we’ll be on the dole!” (notes, October 2016). He thus tried to bring focus back to what he saw as an issue that spoke to every site’s interest. Yet this proposition was not taken forward, because, as noted above, EIEUSR and GWU representatives felt corporate strategy was management’s prerogative, whilst other members did not feel back-end unions could comprehend this topic.

The debate continued to play out as the TUN pushed for the GFA. The CFDT leader argued that the TUN’s demands should speak to all workers because, if they, as French unions, only defended “faraway” workers, they would lose credibility with French workers (notes, May 2017). The CGIL representatives outlined both the need for the TUN to “raise rights on the weaker side” and that they should all learn from each other, as they had things to fight for in common (notes, April 2017). CISL representatives continued to focus on the GFA and the TUN more broadly as a way to help non-European workers. Thus, when a UMT representative and I gave a presentation in Agrate, a CISL representative described the goal of the TUN as helping non-organised workers, such as those in the Philippines, to gain dignity (notes, November 2016). Whilst there are blatant inequalities between Global North and South workforces, this way of seeing, possibly not understood in such a light by those who upheld it, sets victims and saviours. It suggests an implicit and patronising power dynamic, especially when articulated with a refusal to speak about one’s own issues. After this presentation, I asked the local union committee whether there were issues from Agrate which the GFA could attempt to address. The CISL’s leader quickly shut down the discussion, illustrating both possible issues of democracy within each union, and the difficulty of some unions to open their local remit to other unions.¹⁰⁷ The CISL leader instead suggested that representatives at each local, national and European negotiation bring up the matter of the GFA, asking “for rights for the countries with fewer rights” (notes, November 2016).

Meanwhile, those imagined “in need” “non-European” workers and organisations were not particularly enthusiastic about the GFA. The UMT, locally strong enough to negotiate without needing an international agreement, supported the GFA in the

¹⁰⁷ Despite their support for Industri’ALL’s approach, Italian unions also organised a stall for the 8th of March, tying their need to tackle gender inequalities in Agrate’s workforce with the demand for the GFA, showing the multiple strains within each union’s stance.

name of “brothers and sisters,” though who these workers were was unclear. The EIEUSR’s ideology and closeness to management, I believe, meant that whilst they supported the GFA in the abstract, they feared demanding things which would affect their site, whilst the suggestion to cap weekly hours encountered the division between workers mentioned in Chapter 6. The Filipino union stayed silent, which, I understood later, reflected their strategic shift towards organising workers within neighbourhoods rather than companies (notes, July 2017). This shows that unions may not always see international solidarity as the best source of leverage or may not always be willing to leverage their potential power. It also demonstrates the issue of irrelevance that overshadows international efforts that implicitly rely upon “oppressed” and “faraway” workers asking for help and do not fight for issues which speak to all workers.

Amidst the complex difficulties of how to make the international speak to union leaders and navigate the leaders’ different ideologies, Jiro’s posture exacerbated the abstraction of the GFA by choosing, *as a tactic*, to dilute the GFA’s demands to make it an easier agreement to sign. Thus, at the December 2016 EWC meeting, Jiro offered to remove articles that might bother management, i.e., all the articles that would make a difference to ST workers. Hearing Jiro suggest that the GFA would not mention a cap on maximum weekly hours, so as not to discourage the company from signing, a CGT leader exclaimed “the GFA will mean nothing and Jiro is a catastrophe” (notes, December 2016). He saw this proposal as proving that Industri’ALL was pursuing its agenda to achieve a GFA in this sector,¹⁰⁸ and evidence that Jiro would push for a “toothless agreement,” which would be a “pure publicity act” and might disappoint Moroccan and Malaysian comrades and stifle enthusiasm for the TUN (notes, December 2016). He argued:

The enthusiasm in Malaysia for the GFA is not a fairy tale. But if, in the end, we negotiate that we will meet three times a year in front of canapés, it’s not going to work. For sure, ST will not negotiate on anything that will improve the working conditions in front- and back-end sites. [...] We need to guarantee at least one or two substantial wins, in order to say that we won this, that it’s worth staying in the TUN and fighting to achieve progress.

His comment is about politics, i.e., whether to relate to management through cosy discussion or through negotiation on material changes, but also reflects a tactical

¹⁰⁸ Jiro’s presentation in September 2017 demonstrated that he held such an agenda. There, speaking three times longer than his allotted time, he outlined Industri’ALL’s interest in setting-up a TUN and signing a GFA in ST, as only two *electronics* TNCs and none in the *semiconductor* sector had signed a GFA (notes, September 2017).

consideration about how to make the TUN's effort worthwhile and legitimate in front of workers. It also illustrates my point about European union leaders seeing the GFA to be for Southern workers rather than for European ones.

Jiro and some union leaders continued to focus on asking for a discussion with management, hoping that branding the GFA as a win-win situation protecting all workers' rights whilst supporting ST's CSR claims would facilitated reaching such a meeting. Italian flyers written to denounce ST's refusal to meet Industri'ALL deplored that "STMicroelectronics' management does not understand the value added by a long-term relationship with worker representatives." It described the GFA as

a mutual commitment to achieve harmonious industrial relations throughout the company's operations [that] provides the necessary mechanisms to deal with problems before they escalate, improves corporate performance, and allows the company to tell customers that it complies with the highest social standards.

In addition to this "win-win" argument, it listed other companies that had signed a GFA, I believe, to reassure workers of the "reasonableness" of the demand. The CGT leader disagreed with this tactic, saying, "it's useless to present the GFA like it's good for ST's management, it just isn't!" This insistence is telling at least in showing that, in the eyes of the CGT, it *should not be*. Encouraged by CISL, GWU, CFE-CGC and CGIL representatives, Jiro suggested inviting ST representatives to the second TUN meeting, an attempt which CGT leaders saw as pointless, since "taking part in a discussion means recognising the TUN," which management clearly refused to do (notes, June 2017). Another CGT leader saw this invitation as replicating the problem with EWC meetings, where ST could present information and boast about its CSR achievements without there being any space to challenge the veracity of these claims or to negotiate anything (notes, June 2017). In waiting for ST's answer, the campaign lost momentum, whilst Jiro's focus on persuading management enacted the international as a series of meetings, conducted by himself beyond workers' reach, whilst the diluted GFA he suggested made the international ever more abstract.

By contrast, after a year of politely demanding that ST speak to the TUN, the UMT, CGT and the CFDT representatives suggested building leverage through direct action, petitions and media pressure.¹⁰⁹ At the second TUN meeting, UMT leaders

¹⁰⁹ Whilst they talked about organising actions, in practice CFDT representatives were less enthusiastic, prompting other French unions to suspect that their leader had developed a closer relationship with management, amidst a broader national shift whereby the CFDT now

suggested that a delegation from each site could stage a sit-in in front of management offices to increase pressure on global HR. A CGT leader similarly emphasised the need for the international to be concrete for workers, through coordinated international actions like the ones initiated in Spring 2016 or delivering a petition to the French state targeting both ST's long-term strategy and the need to increase all workers' social benefits (notes, September 2017). Another CGT leader argued, "we need to think again about 'the political,' that is what to ask for together and how to obtain it. [...] We could have coordinated actions to call out management as soon there is an issue in one site." Several TUN members agreed to a coordinated day of action lest the TUN run out of fuel. A CISL representative suggested picking one theme, such as health and safety or gender inequality, based on a personal story, and organising a multi-site event. Discussion channelled this idea towards the publishing of a "sustainability report" compiled by union members, which could build evidence for the GFA and help convince ST's management to open talks. This counter-report had been a long-standing suggestion by the CFDT representative, who argued, "We need to find something to attack [ST]'s image [...] that's how we'll get them. [...] You need an accident, a precise issue. I'm not convinced, like the Italians or the CGC, about going through the EWC." I was wary of this search for a scandal, because it reintroduced a narrative of victims and saviours and because of the practical issues that would then arise and further delay the TUN, fears which were sadly confirmed. The debate on tactics that took place throughout the TUN shows that, as much as each union and structure favoured certain tactics, there was room for negotiation: GUFs and federations cannot openly stop their affiliates from pursuing their own agendas and members of the TUN also appreciated the need for concrete actions to embody the TUN. Moreover, it shows the different targets imagined by each union: whether local management in the case of a sit-in, global management in the case of a coordinated day of action, the French and Italian states in the case of a petition or shareholders and clients through a media-focussed action. These varying targets show that unions also differed in their understanding of power, and pragmatically, show the need for more collective analyses of corporate power for unions to be able to select the most strategic ways to achieve their demands.

In this discussion, I showed the key opportunity *and* danger of unions pursuing a GFA. As McCallum and Fichter (2015) argue, a GFA can help structure international efforts because it can create an arena for the pursuit of global labour relations, but

acted as the government's best ally in reforming the labour law (notes, May 2017, September 2017).

also crucially, I argue, because it offers a direction for international efforts. In a landscape that presents few avenues for common work apart from reacting to scandalous workers' rights abuse, unions, GUFs and scholars alike are clutching at straws for possible international aims and a GFA dangles answers. However, this case study shows that, whilst the campaign for a GFA gave a direction to the TUN, it also made the international too abstract and emphasised the GFA, and by extension, international solidarity, as for "others." At the same time, advancing the GFA through social dialogue tactics further distanced the international effort from workers. In a situation when workers already perceive international organising as separate from everyday concerns and as a long-term goal which does not answer their short-term needs (Featherstone, 2012), that Jiro pushed for a toothless GFA made the international scale irrelevant as a source of leverage for the workers who had strong local bargaining power, whether thanks to protective national laws or built-in structural power. Cumbers et al.'s (2008, p.381) claim that GFAs which "are not firmly embedded in the particular places of work [...] will be relatively superficial networks," and this was demonstrated in the fact that, save from Industri'ALL, no union really needed the GFA. Unions fought for the GFA in a "shallow" fashion, i.e., to help others rather than themselves and based on ideological, or potentially charitable, beliefs rather than common interests. Cumbers et al. (2008, p.381) criticise GFAs for potentially imposing "European and North American corporatist practices on unions in the global south." More than imposing a social dialogue vision, I argued that the very process of pursuing a GFA encouraged a charity mindset, underpinned by unions' reluctance to open up their own local issues to international scrutiny. Lastly, whilst McCallum and Fichter's (2015) suggest that social dialogue is a strategic way to secure a GFA, in this case, that approach was problematic because it built no leverage and offered no way to mobilise workers in support, since the locus of agency was Industri'ALL, which, in terms of structural, coalitional and institutional power, *had the least amount of power*.

Given the struggle that opening an international space of interaction represents, as shown by ST's numerous tactics to undermine the attempt to create a global scale of discussion, I believe that "the international" needs to be relevant and meaningful to workers, otherwise they will not build the power necessary to open and sustain this scale of interactions. Whilst global campaigns may be initiated and energised by a vibrant local issue, often around a blatant unfair practice (see for instance Anderson, 2015; Brookes, 2013a, 2017; Castree, 2000a), finding ways to build long term collaboration remains an open question. The contrast between ST unions' 2016

campaign and their GFA effort suggests that, in TNCs which feature no flagrant scandal, there is a need to imagine more than bargaining for rules, but for rights, respect and changes that directly speak to workers' needs and dreams.

Conclusion

The first difficulty is that there is no binding legal framework for the company to come to an agreement [at the international level]. [...] The second difficulty is to successfully create the feeling of being in the same company and of having common interests, and to share this feeling with workers. The third difficulty is that, at one point or another, we'll have to organise common actions and they'll need to be sufficiently powerful to have an impact on the company's policies. (Maurice)

Maurice's quote clearly explains how, with no institutional power to draw upon, unions need to create intra-union power by building common interests between workers in order to leverage inter-union power capable of opening an international space denied by the company. Throughout this Chapter, I showed the difficulties that piled up as ST unions tried to achieve this. Along with the expected resistance of their employer, the pragmatic issues of lack of time, uneven resources and varied abilities to speak in the chosen lingua franca, I emphasised the importance of workers' and unions' socio-spatial positionalities and ideologies. These shaped workers' ability to care for faraway colleagues, their ability to trust other union leaders' motivations and their desire to work together. Whilst important, I also showed how union leaders attempted to work around these reactions and to create a greater feeling of comradeship and care between ST's workforces by sharing stories and establishing direct contacts between workers, efforts which, I believe, were significant in grounding international solidarity and starting to perform a more grassroots internationalism.

Beyond these positionalities and stances, I also stressed the politics inherent in building scales and their representations. I showed that, in the TUN, how the international was imagined had consequences for how it was performed and crucially which organisation was in charge and able to impose its vision. Some leaders endorsed a top-down vision that held that the obvious international labour actor, the GUF, should speak for the TUN. Other leaders pictured the TUN as the apex of a pyramid with the local at the base and the international on top, with each scale requiring an agreed-upon stance, whilst others held a grassroots approach, where each union could initiate international activities without waiting for others' approval. That the first and second vision merged – in a context where the international scale “structurally” does not belong to local leaders, who lack confidence in what they can do at the international level and where moderate unions favoured institutional approaches – led TUN members to delegate coordination to Industri'ALL's representative and to follow his moderate agenda. Furthermore, the TUN's choice to

uphold consensus at the international scale reinforced conservative unions' abilities to stymie grassroots approaches and more confrontational tactics, demonstrating how scales are not only nested but intermingled. Whilst Anderson (2015) suggests that local issues can reverberate and energise a network, I show the flipside of such an influence: how the international was imagined as consensus-based became intertwined with local situations and unions' ideologies to work against more grassroots internationalism. Given such entangled consequences, I outlined the need to imagine the international space in a way that respects local autonomy without kerbing militant dreams, though this requires facing serious contradictions in terms of democracy between unions and building power across unions more generally.

Amidst these conditions, I emphasised the importance of unions grounding international solidarity in concrete data exchange, stories, relationships, *and* needs in order for workers to be able to care about distant others, see international solidarity as relevant to their needs and be able to perform actions with an international outlook. This need for grounding was demonstrated by the failure of the TUN once it was entrenched in pursuing a GFA. Dufour-Poirier and Levesque (2013, p.52) claim that framing transnational unionism to respond to local contexts and needs "emerges as a critical prerequisite for sustaining local actors' involvement in the alliance. Transnational unionism, without such a frame, may often appear irrelevant and inaccessible for workplace trade union leaders." Indeed, in contrast with the campaign against financialisation which answered workers' fears, created a powerful political narrative, and featured a range of tactics (from dialogue to petitions and rallies as well as symbolic actions which performed a connection across ST's workforce), or with the direct exchange of stories and information organised by the TUN, the choice to pursue a toothless GFA through social dialogue brought on increasing abstraction to international efforts. Hyman (2001, p.173) claims that "building collective solidarity is in part a question of organizational capacity, but just as fundamentally it is part of a battle of ideas." In advocating for a toothless GFA through faraway and institutional procedures, the TUN made internationalism a bureaucratic and abstract process, which was unable to excite local workforces and unions to fight for its goals, whilst it gave control over the TUN's timeline to the company. Increasingly, the TUN was sustained by personal relationships rather than by a vision of what to do together or what it could achieve. This was confirmed by the fact that no concrete step has taken place since the otherwise comradely third TUN meeting. Whilst critical of an institutional approach to international solidarity, I also acknowledge that a more grassroots internationalism will be vulnerable to the

impacts of workers' and union leaders' varied socio-spatial positionalities and ideologies and yet, I believe that such grounded-ness is the only way to answer the challenge of internationalism as both an ideal of solidarity and a strategy for workers' power. To contribute to the imagination of what such solidarity can mean in practice and thus its performance, beyond encouragement, I argue that academics and activists alike need to help build stories of grassroots international solidarity.

Lastly, I showed how TUN members tried to overcome the distances between workers through two competing narratives. Some union leaders supported reciprocal international exchanges on the basis that to be relevant and supported by workers, "the international" should speak to all workers' interest. Others emphasised the TUN's goals as to help more disadvantaged workers in the Global South rather than themselves, a charitable posture which was encouraged by the choice to pursue a GFA. I reflected on the need for solidarity to be grounded in reciprocity and shared vulnerability to and desire for international solidarity, if it is to be truly radical and avoid the pitfalls of charity, whilst acknowledging the difficulty this represents given the ongoing competition between sites, but also the uncertainty that opening this scale represents for local leaders. Featherstone (2015) speaks of solidarity "without guarantee" to highlight how solidarity is a political construction, shaped by different relations and connections, which are then open to change, whilst van der Linden (2003) argues that internationalism must be achieved time and time again. I hope that this experiment was just a step along a long road, to make by walking.

Chapter 10:

Conclusion

Throughout the thesis, I engaged with the *material* realities of work in, and across places, in one of the leading industries of the 21st century, to analyse the conditions that framed workers' ability to build power at the international scale and to create a geography of care that incorporated workers beyond the national arena. Harvey urges that the geography that we write (and make) should be

A peoples' geography, not based on pious universalisms, ideals and good intents, but a more mundane enterprise that reflects earthly interests, and claims, that confronts ideologies and prejudice as they really are, that faithfully mirrors the complex weave of competition, struggle, and cooperation within the shifting social and physical landscapes of the twentieth [and twenty-first] century. The world must be depicted, analyzed, and understood not for what we would like it to be but as it really is, the material manifestation of human hopes and fears mediated by powerful and conflicting processes of social reproduction. (in Mitchell, 2008b, p.102)

I tried to follow this guideline. I analysed the contradictions, fears and hopes of ST workers as I found them in their diverse circumstances while paying attention to the ways in which the complex weave of competition and division they faced may change. Caught in these site stories and relationships, I struggled to “bind” the story and my arguments. Details and contradictions kept pulling at the seams of broad claims and, to summarise my core argument, I showed that these realities, stances and contradictions framed but also enabled unions' capacity to act in solidarity with one another at the local, national and international scale and their capacity to renew the internationalist dream with a grassroots approach.

In Chapter 2, I showed the emphasis within labour geography on analysing the material *conditions* of labour agency to assess the possibilities for and constraints on progressive politics (Cumbers, 2015; Mitchell, 2011). Coe and Jordhus-Lier (2011) suggest that this can be done by “embedding” labour in its temporal and spatial dimensions as well as in the GPNs and states they are part of. When attending to these questions regarding *international* labour agency, I used the framework developed by Brookes (2013a) to distinguish between unions’ sources of power, emphasise the importance of the *variegated* subject positions from which workers act and build intra-union power, and analyse how these varied forms of power and culture affected international union collaboration. In Chapter 3, I outline my attempt to grasp this international effort through an ethnographic approach, based in observation of and participation in the TUN along with site visits and long-term relationships with some union leaders and ReAct members.

My thesis offers three interrelated arguments. I first demonstrated that the ability of ST unions to exert structural, institutional and coalitional power was *conditioned* by the world’s uneven development, but also, more specifically, by the spatial and temporal dimensions in which workers were embedded. These encompassed the particularities of semiconductor production and their repercussions upon national territories; the factors which informed how ST’s internal competition organised; sites’ contexts; business trends; workers’ socio-spatial positionalities; corporate strategies to undermine militant unions; and unions’ varying stances in response to these diverse contexts. Second, the thesis showed that attention to workers’ *contradictory loyalties* is important to understand workers’ agency. Workers faced spatial *and* temporal dilemmas, as their need to secure their own site’s survival both pulled them apart, and when faced with an existential threat, brought them together. Drawing on the example of workers’ fight against ST’s financialisation, I showed that workers may organise to save companies from self-defeating profit-seeking impulses, and in so doing, shape their geographies. Attention to these contradictory realities, I claimed, is also *empirically* crucial to workers’ struggles, enabling activists to correctly identify and activate sources of leverage and to understand the landscapes within which workers have to manoeuvre. Third, I demonstrated that paying attention to *specific realities* of workers is crucial to the building of international labour solidarity, as it is only through being grounded in workers’ concrete needs that internationalism will be able to rally them to fight and make international solidarity real. In this conclusion, I return to these three interrelated arguments.

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In Chapter 4, I recounted the story of the TUN, introducing the spatialities, contradictions and varied stances of each union that made and unmade the TUN over time. The following chapters dissected these spatialities and stances, as well as their impact on ST unions' effort to build a grassroots internationalism. In Chapter 5, I showed that the economic and technological factors that sustain the relentless progress of semiconductor production, along with the path dependency feature of semiconductor development and the technology's crucial role in industrial growth and military strength, have prompted some states to actively protect their semiconductor industry. These territorial and geostrategic interests informed ST's historical development and continue to shape its current location strategies, illustrating how firms' local trajectories are inseparable from global processes and how global tendencies shape the various territories which make up a TNC. Beyond *shaping* workers' landscapes (or states as *a spatiality*), these considerations also encouraged front-end unions to adopt nationally focussed strategies to leverage the interests of *some* states as *actors*, with their own agendas.

In the context of the competition within ST for investment and production loads, I demonstrated that sites, depending on their place in ST's production network, faced diverse pressures mediated by varying significance of labour costs, state support, and the need to protect technological secrets. This meant that unions were unevenly protected in terms of offshoring and related differently to their states and, in parallel, to each other. Since back-end sites' profitability was more reliant on low labour costs than front-end sites', back-end unions were more wary of sharing data related to wages and productivity with one another, whilst front-end unions were more prone to develop cooperative relationships with their states to help secure the large capital investments required for semiconductor production. These varied conditions, as Anner et al. (2009) assert, demonstrate the importance of attending to the sectoral specificities that structure the scaled geographies of competition within a TNC in order to understand unions' ability to collaborate internationally. Further, my analysis of the campaign by ST unions demonstrated the continued significance of the national scale to workers' agency. Workers were able to leverage the state's interests in this significant sector to achieve their demands, demonstrating the power that is available to workers when they tie their demands to public goals and highlighting again the crucial role of the state in the functioning of markets and technological development despite the talk of globalisation or financialisation. Whilst unions adopted a state-focussed strategy, they coupled it with a global outlook, supported both by an alternative management perspective, which stressed the

interconnectedness of ST's workforce, and by a political understanding of solidarity. This outlook, as well as the global demands that it put forward, enabled them to bypass nationalist reflexes, to some extent and temporarily.

In Chapter 6, I showed that workers were variously positioned, not just in relation to ST's network of production, but also at the local level, because of their gender, immigration status, religion, and job description, all of which shaped their ability to build intra-union power. These identities were mediated by broader social contexts and discourses; by corporate tactics, which framed these identities as sources of antagonistic interests; and by workers' own decisions to embrace, or not, these identities as divisive. Whilst in some instances these identities reinforced intra-union power, in others, notably as a consequence of divisive corporate tactics, they undermined workers' trust in each other and their ability to see a common interest. This impact was locally varied: not all unions were equally challenged by workers' diverse positionalities and they responded differently to this challenge. Further, in Chapters 6 and 9, I showed that workers' diverse socio-spatial positionalities were also key obstacles to unions ability to develop inter-union power both locally, for instance in France, and internationally, within the TUN. Whilst these realities presented difficulties for the TUN, ignoring them proved more harmful.

These variations connect to my third point, namely the importance of attending to the *stances* that unions chose to uphold towards management, because these stances were varied, led to more or less ambitious demands to improve working conditions and benefits, and divided unions, and by extent their power, locally, nationally and internationally. I showed that mistrust between unions was heightened by predictable factors such as distance and lack of familiarity, but also by corporate practices which targeted individual unionists alternatively with promotions or harassment, to estrange them from the workforce and their fellow activists. The various stances which unions chose in their conflict (recognised or not) with management undermined national and international attempts to build inter-union power. This claim illustrates why grounding "labour" in place but also, and crucially, in its organisations' *stances*, is essential to understanding workers' ability to organise across space (Brookes, 2013a, Birelma, 2018; Bolsmann, 2010).

The last spatiality I analysed was the international space, embodied in meetings, conferences, WhatsApp groups, email threads and concrete actions, that the unions created, first as a loose group mobilising against financialisation and second, as a formal network. The unions' uneven access to resources, along with their local

realities which encompassed pressing local needs that overwhelmed activists' time and existing tensions between unions, shaped how they interacted with and within these international spaces. Furthermore, TUN members disagreed over its guiding goals and vision, torn between the institutional approach embodied by Industri'ALL and the more locally attuned demands that I, supported by ReAct and some unions, tried to promote. The conflict was manifested in the political and interdependent questions of *who* controlled the nascent network, *how* the network took decisions, *what* it aimed for, and *how* best to achieve its demands. The answers to these questions shaped the outcome of what international solidarity meant as a source of *leverage* and as an *ideal*. In this instance, because the international was imagined as nested through national spaces which were under the remit of each national union, only decisions taken by consensus were deemed to speak for the TUN. This, combined with the fact that some unions held moderate approaches, led the "democratic" international space to stifle more ambitious demands in favour of toothless and uninspiring ones and to halt actions aimed at exerting leverage over ST. International collaboration became merely the replica of more conservative European approaches to social dialogue, with a patronising hint of "helping" Global South unions to achieve the advantages that exist in Europe rather than a struggle which mobilised unions on an equal footing, driven by the vision of reciprocal solidarity.

This unsatisfactory outcome, I argued, resulted in part from most unionists' feelings of illegitimacy at the international level, a representation which further favoured the status quo. This stresses the need to imagine international labour solidarity as embodied in multiple places, relationships and actions, built through trust and time rather than belonging to formalised decision-making bodies. In terms of how to make decisions at the international level, my work showed the importance of involving all unions. However, I also outlined the dangers of having one GUF in charge, *and* stressed that requiring decisions to be taken unanimously in practice favoured more conservative approaches. Resolving the tension between building grassroots and democratic decision-making international networks without stifling more militant approaches, I argue, is crucial to furthering genuinely radical internationalism. Finally, I stressed the need to create ways for local unionists to grasp the value of international solidarity, notably by having international goals that speak to local needs, and representations of international solidarity which straddle care for distant others *and* the ability to be cared for by distant others.

These various spatialities (ST's GPN, unions' local contexts, workers' socio-spatial positionalities, unions' stances, and the TUN) were dynamic and interconnected, since as much as unions were tied to their local sites, they were able to draw upon national laws, emphasise rights provided through international agreements and leverage international relationships to destabilise local labour-management regimes in their favour. I attempted to thread an attention to temporalities throughout my discussion, showing how workers' varying temporal statuses led to a fragmented workforce, in which some members were more vulnerable than others, and a fragmented labour movement, as past conflicts between unions continued to bear on present inter-union collaboration. I showed that workers' various nested and intertwined spatialities and temporalities, acted as *conditions* shaping how unions were unevenly able to oppose the company's plans at the local level and how union leaders engaged in and imagined their international activities, and as *tools* to further their interests, whether drawing on memories of a time when the company followed an industrial vision to contest its current financialised management, or creating professional and emotional connections among workers' across ST's GPN.

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Throughout my empirical chapters, I illustrated the pertinence of attending to the specific and contradictory relational spaces which unions were part of and dissected these actors' potentially contradictory interests and goals. I showed that the French and Italian states acted as rent-seeking shareholders, when accepting that ST increase its dividends for ten years, and heeded a neoliberal vision when they took refuge behind the notion of the "free market" to justify the closure of some of ST's sites. Yet, they also switched stances and intervened to curb ST's financialised strategy and to protect the industrial development of some of their territories, following the successful mobilisation of a broad section of local actors. Whether ST was run by managers seeking personal financial gain or by others who were driven by an industrial ambition influenced how the company worked, and crucially, how workers related to their labour. The variously politicised relationships that union members had with local management as well as their differing union's ideologies undermined trust between unionists, and thus their ability to work together at a range of scales. Lastly, workers chose, *or chose not*, to know about and care for workers in different roles and sites.

Showing that "labour," "capital," or "the state" when embodied in concrete people and places had multiple and potentially contradictory interests was crucial to

assessing *pragmatically* potential sources of coalitional power and leverage that unions could draw upon, whether that meant finding shared interests with public representatives and corporate clients or finding shared demands which could bridge the division between blue- and white-collar workforces and between differently-placed unions. Cumbers et al. (2008, p.371) claim that “labour is taken too often as a given without a deeper conceptualization of [...] its international constitution and divisions, and its relations to other actors within global capitalism such as ‘the state’ and ‘capital.’” *Theoretically*, attending to the granularity of each actor responded to this critique along with Glassman’s (2011) emphasis on the understanding the geopolitical aspects of a GPN; Schoenberger’s call (2001) to attend to the individualities of each manager; and Wills’ suggestion (2008a) to “mess up” class in order to analyse the multiple positionalities and identities which may both complicate, sustain or renew class politics. As I argued, recognising workers’ “messy” identities and affiliations, which bring workers and their organisations to face *contradictions*, is part and parcel of claiming that workers have *agency*: they may *choose*, determined in part by geographies and histories not of their own making, to side with management or to favour their local loyalties, over standing in solidarity with their colleagues.

Contradictions are what makes capitalism both tremble and land back on its feet, in an ever-tightening cycle of destruction and exploitation (Harvey, 2006 [1982]). However, I argued that they are also fundamental to the idea of a “labour spatial fix.” As shown in Chapter 7, most workers are concerned with the protection of or modest improvements in their realities, rather than their overturning and care about their work. Workers’ attachment to their work and their demands for recognition and respect prompted them to resist the rise of a financialised strategy in ST, which they saw threatening the paradoxical equilibriums that held their company together. Unions, by attending to workers’ contradictory feelings about work, as both alienating and something that they cared about and needed, were able to find a common interest to fight against ST’s financialisation and leveraged this caring posture to increase the appeal of their demands to white-collar workers and to public stakeholders. In mobilising for the state to intervene and protect their company from the threat to ST’s productive capacity, workers were, of course, protecting their jobs, most of which depended upon ST maintaining an industrial outlook. Beyond this clear self-interest, workers, consciously or not, also played a role in the stabilisation and survival of the company. Their fight for ST to change its corporate strategy also protected their company from the paradoxes entailed in a capitalist outlook.

This campaign shows workers' ongoing schizoid relations to capitalism (Cumbers et al., 2008), in that they are vested in capitalism's regulation and, potentially, survival in the short-term, even if in the longer term they are "victims" of entrenched inequality. The contradictory dynamic further illustrates workers' fundamental role in *shaping* the geography of capitalism. This type of agency was core to Herod's (1997, p.17) labour geography project, where he suggested the need for

A more deeply political theorization of the contested nature of the production of space under capitalism for, ultimately, it is the conflicts over whose spatial fix (capitalists' or workers') is actually set in the landscape that are at the heart of the dynamism of the geography of capitalism.

Here, he explicitly states that the dynamic contradictions which are core to Harvey's (2006) understanding of how capitalism develops and survives by *making space*, albeit in a temporary manner, cannot be understood as capital's making only. My work illustrates how, in practice and at the level of a company, workers and their organisations were involved in finding a "fix" to the long-term contradictions prompted by heightened short-term value extraction. This case study, I argued, aptly illustrated the fragility of financialisation as a new round of capital accumulation, given how a focus on maximising shareholder value exacerbates the next crisis by threatening both its means of production and its workforce, which, ultimately, is the source of its productivity. Yet, my analysis also suggested that financialisation, in its heightened drive to extract value could also offer grounds for new class formation processes, and that these processes of class resistances were both crucial to secure workers' jobs in this company, and by extension, to protect this company from the contradictions its financialised management within a financialising landscape engendered, if temporarily. Greater analysis of capitalism's "fixes" as *contested* processes between workers and people at large, capital and the state, as reflecting the result of workers' needs and constrained ability to shape their landscapes, and as ever temporary solutions to capitalism's crisis remains crucial to understanding how capitalism endures and how it can be challenged.

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Finally, I showed that international labour solidarity was both a *means* for workers to build power, and a related *ideology* that upholds that workers share common interests, with the need to care for one another on that basis. This distinction is crucial because it highlights the tension between the fact that "in union there is strength" and this strength would be best built at the international level, and the fact that, in

practice, international collaboration is seldom the most relevant way to exert power. Within TNCs, workers and unions seemed as much pulled apart by their realities and experiences as brought together. Baptiste, well-aware that international solidarity did not strengthen French unions, still pushed for it, claiming that “the goal is to create solidarity even without concrete progress, especially in these times of nationalist withdrawal” (notes, May 2017). This is where my politics intersects with my academic identity: like Baptiste, I believe in the importance of sustaining the *ideal* without any guarantee that it will work or brings about greater power in the short-term. Tsing (2004, p.8) argues that “universals are effective within particular historical conjunctures that give them content and force.” Likewise, to give the abstract ideal of labour solidarity shape, one should engage with it as a concrete, “messy” and constantly changing political endeavour and narrative, grounded in workers’ needs. In union, there *is* strength, but there is also strength in grounded approaches that do not rely on an ideal notion of unity before it is enacted and start with small steps.

Significantly, whilst I emphasised the importance of workers’ given and reproduced differences, I also tried to avoid another type of essentialism, according to which these intrinsic differences preclude them from collective organising. Wright’s argument (2006, p.100) that making the leap between “lived experiences of struggle [unfolding] in highly particular ways and the recognition, at some level of abstraction, that common issues bind these experiences in some important ways” continues to challenge activists and scholars alike as they fight for social justice. I strived for my analysis of workers’ uneven agency to also attend to the question of creating commonality. Gibson-Graham (2006, p.xxv) criticise studies which characterise limits to workers’ agency as fundamental and definitive, rather than as “things to be struggled with.” They speak of one of the groups they studied, which, whilst expecting “to confront obstacles, difficulties, threats of annihilation, and co-optation,” treated “these as everyday political challenges rather than as limits to politics” (p.xxv). This description speaks to my hesitancy to reify the limits to workers’ and unions’ ability to create commonality locally and internationally. Whilst these limits proved to be crucial stumbling blocks to the TUN and showcase the importance of workers’ varied socio-spatial positionalities, unions were also able to create *political* narratives which enabled them to recognise common interests and bridge their differences, as well as to connect with the social being of distant colleagues.

Indeed, in Chapter 7 and 8, I showed how workers and unions politicised their experiences of financialisation, identifying clear issues, grounding their critiques in

workers' producer pride, and articulating the conflict of interest between themselves as organised workers concerned for their future and their financially-driven management. This framing was effective in that French unions, with varying support from other unions, were able to leverage coalitional power to moderately shift ST's financialised strategy, but also to find common interests, temporarily, with other ST unions. The campaign against ST's financialisation, based on workers' experiences, fears and concrete needs and putting forward a common interest structured by a political narrative, fostered international collaboration more effectively than the campaign for a GFA, which remained abstract. The differences between the two campaigns illustrate why a *grounded* approach to international labour solidarity is needed, in order to both analyse material differences and resulting divisions between workers *and* how these conflicting loyalties may change and enable narratives that sustain unions finding common interests and struggling together. Following growing frustration with Industri'ALL's approach, I considered that

The power of capital is the power to abstract places and people, in numbers and terms such as 'financial outputs' and 'inputs.' Labour isn't able to do that. It is formidably and irrevocably attached to people, names, individual stories, conflicts and power struggles. Does the international require abstraction? How can it take shape, body or weight in order to have consequences? There is a fundamental divergence between the act of the abstraction that a capitalistic view of people as numbers embodies and workers' relationship to themselves and each other. (notes, July 2017)

Trade unionism has always been about more than class, sustained as it is by local relationships, cultures, values, and a sense of community. For internationalism to take shape, I believe that workers need to create a similarly rich relational environment on an international scale. As I argued in Chapter 9, researchers can play a role in this endeavour, by helping to share and translate this wealth of worlds and experiences between different unions. Further, by sharing stories, establishing direct connections between workers and unions leaders and attempting to build common demands, union leaders in ST were also able, in a modest fashion to build a more grounded international solidarity. Ryland (2010, p.6) claims

It is too simplistic to claim that workers automatically identify with internationalism and other workers according to an idealist working class consciousness or social praxis or identity. This is not to disregard the possibility of an international solidarity motivated by a universal class consciousness but rather, to look towards one that is constructed through recognition of common concerns directly relating to the local.

Whilst this is something of a straw(wo)man argument, since I do not believe that Marx, Engels or any militant trade unionists ever just wanted abstract solidarity, I repeat this point of “grounding” or “embodying” the international because when an abstract relation to international solidarity animated workers, for instance French workers believing they *should* speak to Moroccan ones because they *obviously (!)* shared common interests, or when union representatives went through the motions of attempting social dialogue at the international scale, nothing concrete took root and solidarity faded into thin air. When French and Moroccan unionists called each other in October 2014, they did not know what to say to one another. When reading this account, I wrote, “There is almost a need to create the vocabulary to imagine a transnational struggle, beyond the somewhat hollow principles - a vocabulary that I need to create for myself as well” (October, 2015). This vocabulary should encompass workers’ daily experiences, needs, dreams, fears, and also provide examples and stories of what they *can* do together, at a range of scales.

Without a *concrete* imagination of what one could *do* together that spoke directly to what workers experienced, I saw workers and unionists fall back into the ease of institutional habits and toothless demands of fighting for rules, which responded to no ones’ needs. By contrast, when they spoke about machines, safety equipment, layering processes or corporate strategy, their interests and producers’ pride lit up – albeit in an uneven fashion. The realities and feelings, notably the notion of producer’s pride, I believe, are characteristic of many workplaces and *can* provide grounds for workers to see their singular experiences as shared, unfair and susceptible to change. These connections need to be *devised* according to the particularities of each site, rather than taken for granted and this is where a pragmatic approach to research may be helpful. Lastly, I argued that solidarity depends on workers and trade unions being ready to take a step into the unknown, cognizant of what they *could* do together, and willing to show a measure of vulnerability. Vulnerability is both about providing the impetus for workers to take action, i.e., stating a need that others can answer, and about ensuring a measure of *reciprocity* in efforts which can stray into “help” rather than solidarity. International labour solidarity may not exist now; it may still be mostly an abstract dream. The point is to make it real by looking at workers’ diverse experiences, and working with the contradiction they entail and the possibilities they offer.

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In September 2017, I attended one of the last protests in Grenoble against the wave of labour reforms. I wrote, “the day gnaws at me, we are so few and it feels like there’s a world which is bowing out.” The union paraphernalia, the dated discourses, the tiredness, the sparse numbers and my own exhaustion left me parched for hope. And yet, as I write the final words of my thesis, new waves of strikes and protests reverberate throughout France whilst UCU geography members are building their usual fire for the third wave of university strikes. This action-research offered no certainty. I remain unsure about the postulate held by hopeful scholars and GUFs – whose role is structurally to hold this belief – that TNCs may offer “alternative cartographies” (Wills, 2002) which can enable greater feelings of solidarity between distant workers. Whilst TNCs remain key nodes of power, I am all too painfully aware of the myriad difficulties that activating this spatiality, which does connect diverse workforces in both interdependent and competitive ways, encounters. I tried to hold my doubts at bay, along with recognising that the analysis of failed attempts might be illuminating (Evans, 2010; Hennebert (2010) and that there is a latent capacity for people to resist, that no cold materialist analysis or personal disillusion can foreclose. Wallerstein (2005, p.50) encourages us “to hold on to our visions even if we won’t reach them in our lifetimes. If we put our work in perspective, we are part of a longer struggle. The point of an ideal may NOT be to reach it, but to let it guide our journeys.” There were no blueprint – and I would be suspicious of any, and as Stoeckler (1999) suggested, I gave it a try.

Throughout this work, I was humbled by activists’ generosity, and by their ability to continue to try, fail, and hope still. Faced with the insane reach of and massive stakes involved in globalised capitalism, union struggles need to stay humble and take one step at a time, learning from their mistakes and small successes. I tried to learn, and I hope my readers have as well. If I sometimes despair(ed) at the results of this work, I cling to the need for this analysis, by remembering that things did change, albeit temporarily and that, as the latest strikes suggest, building a sense of collective agency and continuing to uphold hope needs to be continuously performed and embraced. It is hard work, comes under threat, crumbles, changes and starts again and not anew. The world we need is not at hand, it has to be made. Remaining open to hope is remaining vulnerable to disappointment, but this vulnerability is key to change. To quote Younge (2020), “The propensity to despair is strong, but should not be indulged. Sing yourself up. Imagine a world in which you might thrive, for which there is no evidence. And then fight for it.”

My Marxist self would add, “We have nothing to lose but our chains.”

Appendix 1: Interviewees summary

| Name | Site | Job | Union |
|-------------|-------------------------------|------------|--------------|
| Andre | Grenoble | Engineer | CGT |
| Baptiste | Grenoble | Engineer | CGT |
| David | Rousset | Operator | CGT |
| Ederm | Tours | Engineer | CGT |
| Etienne | Tours | Engineer | CGT |
| Jean | Grenoble | Technician | CGT |
| Jo | Rousset | Operator | CGT |
| Julie | Grenoble | Engineer | CGT |
| Laura | Grenoble | Engineer | CGT |
| Louis | Crolles | Operator | CGT |
| Madeleine | Grenoble | Engineer | CGT |
| Martin | Grenoble | Engineer | CGT |
| Maurice | Grenoble | Engineer | CGT |
| Otto | Crolles | Ope/Tech | CGT |
| Raphael | Grenoble | Technician | CGT |
| Rene | Rousset | Operator | CGT |
| Richard | Crolles | Operator | CGT |
| Sophie | Grenoble | Operator | CGT |
| Thomas | Crolles | Tech | CGT |
| Alban | Crolles | Engineer | CFDT |
| Arnault | Le Mans | Engineer | CFDT |
| Baltazar | Rousset | Engineer | CFDT |
| Emmanuelle | Rousset | Engineer | CFDT |
| Gauthier | Crolles | Engineer | CFDT |
| Guillaume | Grenoble | Engineer | CFDT |
| Jules | Crolles | Technician | CFDT |
| Nathan | Rennes | Technician | CFDT |
| Samuel | Rousset | Technician | CFDT |
| Timothe | Crolles | Engineer | CFDT |
| Donald | Tours | Engineer | UNSA |
| Claire | Rousset | Engineer | CFE-CGC |
| Ederm | Tours | Tech/Inge | CFE-CGC |
| Pierre | grenoble | Engineer | CFE-CGC |
| Thibault | Le Mans | Engineer | CFE-CGC |
| Leo | Federation | | CGT |
| Aaron | Malta, former union rep | federal | GWU |
| Christopher | Malta, current union rep | federal | GWU |
| Liam | current union representatives | Technician | GWU |
| Alessandro | Agra | Operator | CGIL |
| Angelo | Agrate | Operator | CISL |
| Benito | Catania | Engineer | CGIL |

| | | | |
|-------------|---|-------------|--------|
| Carla | Catania | Operator | CGIL |
| Claudio | Catania | Operator | CGIL |
| Daniele | Catania | Engineer | GCGIL |
| Giuseppe | Castalietto | Engineer | CGIL |
| Guila | Agrate | Engineer | CISL |
| Lucas | Agrate | Operator | CISL |
| Rosa | Catania | Engineer | CGIL |
| Afiq | Muar | Operator | EIEUSR |
| Ashraf | Muar | Supervisor | EIEUSR |
| Diyana | Muar | Operator | EIEUSR |
| Imran | Malaysia | Organiser | EIEUSR |
| Manish | Muar | Operator | EIEUSR |
| Najah | Muar | Operator | EIEUSR |
| Nayla | Muar | Operator | EIEUSR |
| Syami | Muar | Technician | EIEUSR |
| Aya | Bouskoura | Operator | UMT |
| Azzeddine | Bouskoura | Engineer | UMT |
| Belaid | Bouskoura | Operator | UMT |
| Bilal | Bouskoura | Operator | UMT |
| Carlos | Bouskoura | Engineer | UMT |
| Choukri | Bouskoura | Technician | UMT |
| Daoud | Bouskoura | Engineer | UMT |
| Farid | Bouskoura | Operator | UMT |
| Ghazi | Bouskoura | Operator | UMT |
| Hosni | Bouskoura | Supervisor | UMT |
| Larbi | Bouskoura | HR | UMT |
| Massoud | Bouskoura | Operator | UMT |
| Mahmoud | Bouskoura | Maintenance | UMT |
| Mehdi | Bouskoura | Supervisor | UMT |
| Maryam | Bouskoura | Supervisor | UMT |
| Nour | Bouskoura | Operator | UMT |
| Christopher | Federal representative | | UWEEI |
| Damien | Former chief economist ST | | |
| Charles | Industry expert | | |
| Mrs Fioraso | French MP Isere | | |
| Akmal | HR manager Muar | | |
| Harith | HR manager Muar | | |
| Emile | Former mayor Isere region | | |
| Jiro | Industri'ALL ICT, Electronics and Shipbreaking representative | | |

Appendix 2: Consent form (English version)



Emma Saunders,

Institute of Geography, the University of Edinburgh, Drummond Street, EH8 9XP,
Email: s0837074@sms.ed.ac.uk

Consent Form

I,

in signing this consent form, accept to participate in the research conducted by
Mrs. **Emma Saunders**.

I understand that the research aims to analyse the possibilities and limits to
international labour solidarity in one TNC.

I am aware and agree that :

1. My interview will be recorded, transcribe and coded in order to inform the research mentioned above
2. I can ask to access my interview transcript in order to read over and amend its transcription
3. Excerpts from my interview with Emma Saunders may be used in academic publications and in public presentations
4. I am free to retract my consent at any time during this research. In this case, my participation will cease immediately and any information from my interview will not be used

Regarding confidentiality, I choose to (tick appropriate box)

I agree for my real name to be used in the research

I would like for the researcher to use a pseudonym

Signed :

Signed by the researcher :

Date :

Appendix 3: Semi-structured interview format

Union representatives

Site issues:

- What are the issues, demands and interests of workers at the moment in the site ? How have they changed ?
- What are the ongoing negotiations or priority issues that the union is negotiating at the local level ? (at the national level if relevant)
- Has the atmosphere changed at the worksite ? How so ? How come ? What are workers' fears at the moment ?
- During the various restructuring exercises that you lived through, what happened ? Did workers mobilise ? How so ? Were you able to stop these restructurings ?

Personal union trajectory:

- Why did you join ? And why this union ? What is your vision of your role ? Of your union's role ?
- What have been union victories on your site ? In other sites ?
- How did you achieve them ?
- What are organising/ unionising stories which inspire you ?

Union work :

- How do you unionise people ?
- How to exert leverage ? What are your tactics to influence management ? How effective are they ?
- How do people get in touch with the union ?
- How do you communicate with them ?

International work :

- What do you think of the initiative of the TUN?
- Who do you think should be involved in this effort?
- What are the needs for international solidarity ?
- What are the obstacles you see ?
- What would it be interesting to know from the other sites ?
- What would you be able to share with them ?
- What could be common demands and how to build them ?

Appendix 4: Number of ST workers in R&D, fabs and back-end plants

| Site | Country | Number of workers |
|--|-----------|--|
| Pure R&D | | |
| Grenoble | France | 1,400 |
| Le Mans | France | 250 |
| Sofia Antipolis | France | 300 |
| Castalietto | Italy | 1,000 |
| Noida | India | 1,500 (ST website) ¹¹⁰ |
| TOTAL | | 4,450 |
| R&D connected to industrialisation | | |
| Tours | France | 1,500* |
| Rennes | France | 100* |
| Crolles1-2 | France | 5,000* |
| Rousset | France | 2,670* |
| Agrate | Italy | 4,500* |
| Catania | Italy | 3,949* (ST, sustainability, 2018, p.6) |
| Ang Mo Kio | Singapore | 4,581* (ST, sustainability, 2015, p.5) |
| TOTAL | | 3,000** |
| <p>* This is the <i>total</i> number of workers: <i>many of these workers are not R&D workers</i>. When possible, I quote the source of data. Otherwise, estimations stem from union data; in many instances there was no breakdown for each site regarding R&D workers, thus the two asterisks.</p> | | |
| <p>** This is the total of R&D workers specifically in these sites</p> | | |

Figure 1: R&D workers

¹¹⁰ Most of Bangalore's 600 workers were fired during the restructuring that took place in 2016. I have not been able to access specific data for Bangalore since.

| Front-end production facilities | | | |
|--|-----------|--|---------------------------|
| Site | Country | Number of workers | Size of wafer |
| Tours | France | 1,500 | 125-mm, 150-mm |
| Rennes | France | 100 | 150-mm (|
| Crolles1 | France | 1,000 | 200-mm |
| Crolles 2 | France | 4,000 | 300-mm |
| Rousset | France | 2,670 (ST, sustainability report 2017, p.11) | 200-mm |
| Agrate | Italy | 4,500 | 200-mm, 300-mm pilot line |
| Catania | Italy | 3,949 | 150-mm, 200-mm |
| Ang Mo Kio | Singapore | 4,581 (ST sustainability report, 2015, p.5) | 150-mm, 200-mm |
| TOTAL | | 19,300* | |
| * I subtracted from the total number of workers the workers already mentioned as R&D workers | | | |

Figure 2: Front-end fabs in ST.

| Back-end production sites | | |
|---------------------------|-----------------|---|
| Site | Country | Number of workers* |
| Bouskoura | Morocco | 3,450 (interviews) |
| Kirkop | Malta | 1,600 |
| Muar | Malaysia | 3,900 (ST website) <i>though plans towards becoming 4,400</i> |
| Shenzhen | China | 4,800 (ST sustainability report, 2017, p.9) |
| Calamba | The Philippines | 1,600 (ST website) |
| Toa Payoh | Singapore | 1,400? |
| Rennes | France | 100 |
| TOTAL | | 16,840 |

Figure 3: Back-end production sites

Appendix 5: Subsidies received by ST between 1994 and 2017

| Subsidies received by ST 1994-2017 (in millions of dollars) | | | | | | | |
|---|--------------------|---------------------|------------|---------|------------------|-------------------|----------------------|
| Year | Industrial isation | Capital expenditure | Tax Credit | | Government Plans | | Yearly R&D subsidies |
| | | | Italy | France | Europe | France | |
| | ? | ? | | | | | |
| 1994 | 19.3 (2) | 40.4 (2) | | | | | 80.1 (1) (2) |
| 1995 | 11.8 (2) | 64.5 (2) | | | | | 89.6 (1) (2) |
| 1996 | 4.6 (2) | 93.3 (2) | | | | | 63.8 (1) (2) |
| 1997 | 6.2 (2) | 30.2 (2) | | | | | 55.3 (1) (2) |
| 1998 | | 182.4 (2) | | | | | 63.5 (1) (2) |
| 1999 | | 53.4 (2) | | | | | 60.4 (1) (2) |
| 2000 | | 95.2 (2) | | | | | 42.1 (1) (2) |
| 2001 | | 77 (2) | | | | | 58 (1) (2) |
| 2002 | | 55 (2) | | | | Crolles2 (6) | 76 (1) (2) |
| 2003 | | 62 (2) | 526 (2) | | | | 76 (1) (2) |
| 2004 | | 46 (2) | | | | | 84 (1) (2) |
| 2005 | | 38 (2) | | | | | 76 (1) (2) |
| 2006 | | 15 (2) | | | | | 54 (1) |
| 2007 | | 9 (2) | 78 (2) | 49 (1) | | | 97 (1) |
| 2008 | | 4 (2) | | 161 (1) | | Nano12 | 83 (1) |
| 2009 | | 4 (2) | | 146 (1) | | | 201 (1) |
| 2010 | | | | 146 (1) | | | 106 (1) |
| 2011 | | | | 159 (1) | | | 128 (1) |
| 2012 | | | | 152 (1) | | Nano2017 (4), (5) | 101 (1) |
| 2013 | | | | 146 (1) | | | 57 (1) |
| 2014 | | | | 146 (1) | | | 231 (1) |
| 2015 | | 7 | | 113 (1) | ECSEL : ? | | 144 (1) |
| 2016 | | 15 | | ? | ESCEL 26 (3) | Nano2017 (5) | 94 |

| | | | | | | | |
|--|----|---|----|-------|------------------|--------------------------------------|---------|
| 2017 | | 139 | | ? | ECSEL 7.5 (3) | Nano2017 (5) | 65 |
| 2018 | | | | ? | | Nano2022: 800 announced (7) | 800 ? |
| 2019 | | | | ? | IPCEI | Amount not announced (7) | |
| | 42 | 1,030 | 78 | 1,218 | 33.5 | | 2,186.7 |
| Total France: | | 3,404.7 + 800 (?) | | | | | |
| Total Italy: | | 78 | | | | | |
| Total other: | | 1,072 (unknown origin) + 33.5 (Europe) | | | | | |
| Total ALL: | | 4,588.2 (+ 800?) | | | | | |
| <p>I cross-checked all of ST's annual reports from 1996 to 2017 with an industry expert report (SECAFI report, 2016). Given the changes of reporting standards, i.e., in how different funding streams are reported as "items," these are tentative numbers. Further, from 2004 onwards, ST financial reports no longer specifically record governmental funding. Rather, they speak of 'other income,' which includes: "funds received through government agencies for research and development programs; costs incurred for new start-up and phase-out activities not involving saleable production; foreign currency gains and losses; gains on sales of tangible assets and non-current assets; and the costs of certain activities relating to IP" (ST, Annual Report 2007, p.67). Thus, there is little indication of the provenance of funds and how they are linked with government-backed plans. I cross-checked figures between ST's Annual Accounts and the SECAFI report and I believe the estimations I provide are roughly accurate. I included the cancelled subsidy in Catania because it shows the high level of support considered by the Italian state, though I cannot explain why it was cancelled.</p> | | | | | | | |
| (1) Secafi Report 2016 | | | | | | | |
| (2) ST Annual Report (1996, 1998, 200, 2003, 2006, 2007, 2008, 2010, 2014, 2017) | | | | | | | |
| (3) ECSEL reporting available online. European funds followed one another under different acronyms (MEDEA, ESRPIT, RACE, Horizon2020, IPCUI, ECSEL), and are mainly funded by member states, rather than by the EU. | | | | | | | |
| (4) Number comes from Industry announcements (Usine Digitale, 2014) and from ST's own reporting. | | | | | | | |
| (5) Numbers from PIA 2015, 2016 and 2017 report. Some official documents report that the Nano 2017 program received 600 million euros from the French state, in addition to 38 million from local councils, and 11 million from Europe (Conseil General Isere, extrait de deliberations 11/12/2014, p.7; 24/07/2015, p.2) however I was not able to cross-reference these greater amounts which is why they are not included. | | | | | | | |
| (6) Reverdy (2014, p. 18) | | | | | | | |
| (7) ST 2018Q4 Confcall; Loukil (2017; 2018) | | | | | | | |

Appendix 6: Story of the unionising efforts in Bouskoura and Muar

In Bouskoura, in 2010, after workers lived through the closure of the Ain Seba site and activists being laid off after two attempts to unionise the workforce, forty workers stood for election as branch officers. When the company fired all of them, according to Mehdi, “We had a plan.” The entire fab walked out. Operators chanted and protested through the night until the management took back in all of the fired workers the next day (notes, January 2016). The union persists to this day. Nour recalled,

We had to protest, we organised strikes, we had tough moments to create the union here. [...] In the warehouse department, two members were suspended [because of union activity]. [...] We organised a strike [in solidarity].

Workers supported unionisation because “when [ST] closed the site in Ain Seba, they massacred [sic] workers’ rights” (Farid), but also because “the [existing] shop floor delegate system did not feel transparent” (Mahmoud). Interviewees emphasised changes that have since taken place,

[Before] it was like a dictatorship [...] as soon as you said something [your supervisor could shout,] ‘Go see your manager!’ [...] You could arrive at 5am, beep your badge and be unable to enter [because you had been fired]. (Mahmoud)

Now, we have the right to say no. [...] We have to right to express our opinion, react and say what is important! [...] Before, the company didn’t respect the worker. The worker, like in the army, just had to execute orders. (Nour)

Before there was no dignity for the worker, the HR did whatever they wanted and now [with the union], there is dignity. (Massoud)

UMT won rights for subcontracted workers; an equalisation of the annual bonus, which was particularly beneficial for operators; brought gender parity in engineering roles (notes, February 2019); and improved “transport, the restaurant, health benefits, the insurance, well lots of things!” (Aya). Afterwards, as suggested by the quotes, workers felt respected and able to voice their concerns and needs. Since, 85% of Bouskoura’s workforce has joined the UMT and union leaders continue to mobilise the workforce on everyday issues through flyers, speeches during mealtime, and, when needed, sit-ins. Workers’ quotes are important in highlighting that the UMT’s win was not just about material changes, but also about workers feeling respected at work and able to exercise their job with dignity.

In Muar, following the implementation of new legislation in 2010, activists registered a regional electronics union: EIEUSR. When the organiser filed for union certification in ST, the company rushed to the Industrial Relation office to declare a company union (notes, July 2017).¹¹¹ The nascent union had to contest the legality of ST's move and then convince workers to vote in favour of EIEUSR. Unable to access the work site, activists leafletted workers in buses and used WhatsApp groups to exchange information (notes, July 2017). They urged workers to go to the voting place in groups, to protect themselves from pressure from managers (notes, July 2017). Workers voted in favour of EIEUSR effectively ousting the company union. Since then, over 1,300 workers have joined EIEUSR. The union has won a 7% pay rise and greater parental-leave benefits, ensured that the 12-hour compressed week had an overtime pay provision and extended the two-month annual bonus to contractual workers (notes, July 2017). Since the election, the work site committee has not leafletted workers, nor organised petitions, or walkouts, has been granted an office in the factory and relies exclusively on tri-annual CBA negotiations to improve workers' rights (notes, July 2017).

ST Malaysian and Moroccan workers were thus able to create local independent unions, despite facing strong corporate hostility, and achieved significant improvements through their organising. Both organising successes were supported by unions from elsewhere: workers in Bouskoura received support from the French unions, which pressured their HR¹¹² to prevent further layoffs, whilst in Muar, the ability for electronics workers to form unions resulted notably from a 30-year campaign, supported by American trade unions and the ILO (Wad, 2012). Workers' organising is thus testament to workers' ongoing ability to fight for their rights, and to the scaled relationships, which inform local labour-management relationship.

¹¹¹ Since only one union can exist in each worksite, management may create an in-house union under their control, to prevent the rise of an independent union.

¹¹² Moroccan workers, in a weird legacy of colonialism, remained managed by the French HR department, in contrast to all other sites whose national HR is independent.

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