

LABOUR AND SOCIAL JUSTICE

DEPLOYING HISTORICAL STRENGTH TO SHAPE THE FUTURE

SMABC and Industry 4.0 in the Brazilian automobile sector

Ariella Silva Araujo
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In spite of technological change, unions remain important agents in the process of applying new technologies, which are neither one-directional nor inevitable. In this process unions have agency and their choices are strategic.



In the case of SMABC, *associational power* was decisive at several contentious moments during bargaining with both VWB and MBB with respect to Industry 4.0.



Industry 4.0 demands a »Unionism 4.0«: just transition and wide-ranging proposals that respond to the aspirations of the new working classes which are more female, younger and working under increasingly precarious conditions.



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»**Trade Unions in Transformation 4.0**« examines unions' strategic actions to mobilize power resources in a »new world of work« in which capital uses digital technology to re-organize the labour process. The Global Trade Union Programme of the FES aims to understand how the power balance between capital and labour is impacted and how workers are responding to the threats of the digital rollback towards greater exploitation and precariousness of workers. Pursuing a dialogue and action-oriented approach, the project ultimately intends to contribute to trade unions' strategic reflections, experimentation and purposeful transformation.

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1

INTRODUCTION

This article aims to discuss the *power resources* (Schmalz, 2017) that unions, like the Sindicato dos Metalúrgicos do ABC (SMABC) or ABC Metal Workers' Union, situated in the large metropolitan area of São Paulo, Brazil, have been mobilising to deal with the effects of changes brought about by Industry 4.0, analysing in particular SMABC's trade union action at Volkswagen do Brasil (VWB) and Mercedes-Benz do Brasil (MBB), both located in São Bernardo do Campo. The SMABC was chosen owing to its political importance as a catalysing agent for workers' and social movements' concerns vis-à-vis the dictatorship in Brazil, and because it has served as the foundations for the trade unionism of the CUT (Unified Workers' Central). The choice of the German companies is due to the leading role they have played in the process of digitalisation of their factories, where the two automakers have been pioneers in comparison to other sectors (cf. Matuschek, 2015). As such, advancing automation and digitalisation (projected to be fully implemented by 2035) can already be seen to a greater or lesser extent at their Brazilian subsidiaries, VWB and MBB.

The interest in the labour movement contrasts with the marginal role ascribed to unions as objects of study in research on Industry 4.0. With the perspective of influencing the world of work (cf. Dörre, 2015), corporate organisation, corporations' management culture, the structure of value chains and the social structure, semantically homologous terms like Society 4.0 and Work 4.0 have emerged in debates within and outside of academia (Matuschek, 2016). However, little discussion is taking place regarding the need and importance of a Union 4.0 in the »new world of work«, leading me to two initial remarks. The first is that, with rare exceptions, a major part of bibliographical production limits itself to technological aspects, and much of it is connected to the fields of engineering (production and mechanical engineering) and information and communication technologies (ICTs). While on the one hand these investigations contribute to the debate by emphasising the risks and opportunities that the new wave of rationalisation may offer – whether in the sphere of employment or of companies' global competitiveness – on the other, they diminish (when they do not disregard) the influence that political, economic and social agents exert in the shaping of these processes considered »technical«. This means that they provide a homogenous view of technological developments – a perspective that has been deconstructed by

theories on convergence of production systems (Boyer *et al.*, 1998; Freyssenet *et al.*, 1998; Araujo, 2018; 2019) – and do little to politicise the debate on technological options that are always socio-technical questions. The second is that when unions are not ignored, the literature places them within the theoretical perspective of crisis or decline, approaches that dominated discussions at the end of the 20th century. These are theories that postulate the fragility of trade union organisations in responding to new challenges and their loss of political agency vis-à-vis a broader political and social agenda. More pessimistic studies go so far as to implicitly affirm the end of unions (Telekom, 2015), while others (Bochum, 2015; Matuschek, 2016) underscore the lack of concrete action by unions to avoid the risk of an increase in self-exploitation and pressure on workers of a »Taylorist 4.0« kind.

What one may conclude right from the start is the approaches that currently orient much of research into Industry 4.0 ignore the ways in which unions have reacted historically to the dynamics of economic and productive rationalisation. The change from forms of organisation based on crafts to general unions (the *new unionism*) in England (Hobsbawm, 1984; Chase, 2000), for instance, provides evidence that the phenomenon of »crisis«, as well as not being new, demonstrates the resilience and capacity of unions to reinvent themselves in the face of adverse situations. Additionally, a large part of the projections in these works were organised around the reality of countries in Western Europe, such as Germany, and Anglo-Saxon countries like the United States. The consequences of Industry 4.0 and the strategies of unions in Latin America, for example, are rarely discussed. What is meant here is that despite the Eurocentric view adopted by these studies, it is possible to identify general trends that place new challenges before unions from both North and South, facing them with an interrelationship between processes, although one cannot say whether the effects will be the same, given the different stages of technological development in which different regions find themselves.

One example of the interrelationship between developments can be found in estimates regarding the impact of digitalisation on non-industrial jobs. In other words, it will not be only labour-intensive, industrialising countries that will suffer reversals. Forecasts predict that a new wave of

rationalisation will affect jobs with intermediate qualification levels (cf. Matuschek, 2015; Hirsch-Kreien, 2015; Spath *et al.*, 2013) and especially those connected to the service sector. Osborne & Frey (2013), when comparing existing jobs with those that might emerge by 2025 in the United States, concluded that 47% of industrial and service professions (transport and logistics; production, installation and repair; services, sales and the like; office and administrative support) are affected by digitalisation. In similar studies for Germany, the estimate is around 59%, with greater pressure on administrative activities (86%) (cf. Matuschek, 2015; Brzeski, Burk, 2015). In Brazil (cf. Albuquerque *et al.*, 2019), the estimate of the Institute of Applied Economic Research (IPEA) is that 54% of occupations will be affected.

Looking at this data from a gendered perspective, specific features emerge. Worldwide data from 2015 provided by the International Labour Organization show that half of all women in that year were working in the service sector. In East Asia they accounted for 77% of all service workers, in North America 91.4%, in Western Europe 86.2%, and in Latin America and the Caribbean 80%. Hence, it would appear that women are more vulnerable to »technological« unemployment (ILO, 2016). And in this geography of occupations, most women were employed in sub-sectors considered predominantly female (wholesale and retail; hotels and restaurants; education, health and social care), with low pay and high levels of informality. In Brazil's main metropolises, women on average account for 70% of service workers (14% in domestic work and 9% in administration). The share of female workers in industry is lower (12%), while it is 17.4% among metalworkers, (Dieese-Seade, 2015, a, b, c). With the expectations surrounding the creation of new occupations in Industry 4.0 and given the qualifications (cf. Benešová, Tupaa, 2017) required to occupy them, gender inequality will tend to deepen. Men are the recipients of some 80% of ICT diplomas and 70% of engineering diplomas, whereas women account (cf. OECD, 2017) for some 70% of arts and humanities diplomas in OCDE countries and approximately 60% in Brazil. In spite of such empirical findings, unions continue to ignore the inequalities to which women are subjected. This becomes evident when one considers that unions' major concern in connection with the 4th Industrial Revolution (4IR) has been fixated on the adaptation of technologies: whether outside of human control or open to the involvement of workers and their associations. In the former case (cf. Butollo, Engel, 2015), this means reducing human work to activities that (still) cannot be executed by robots. In the latter, digital systems offer workers decentralised decision-making models, and open up a potential for lifelong learning. Between the poles of unilateral application on the part of corporations and a socially shared development geared towards work, unions have acted politically to shape things in the direction of the latter, although not necessarily with concrete proposals focusing on gender inequalities.

Unions' political action in connection with the launch of new technologies can be identified in the use of *institutional power* resources in order to make feasible what has come

to be known as just transition,¹ an issue that has attracted major attention since discussions on 4IR began. Unions like IG Metall and SMABC, for example, have employed this resource in the hope of exerting some influence on the design of the organisation of work at the company level. And in the political sphere they have employed this resource through public policies aimed at the industrial sector and at training geared towards productivity related to age, to the ability to learn over the course of one's life and to gender. Fear of mass unemployment and the quest for reconversion of jobs have reinforced a brand of trade union practice that includes participation in joint structures with business and governments, as a way out of the future jobs crisis. The response to this crisis has been associated with unions' capacity to propose industrial policies and (re)training programmes for workers threatened by technological unemployment.

Having made these initial remarks, I now turn to the structure of this text. It is divided into two sections, and explores the following questions: how have SMABC's power resources been useful in terms of collective bargaining and agreements, for example? Have issues to which 21st century trade unionism is sensitive, like gender and precarious work, been an element in SMABC's list of concerns and negotiations? How can studying SMABC help in formulating an action plan for 21st century unions, or Unions 4.0, in the automotive segment? The first section maps out the power resources utilised by SMABC over the course of the 1980s, 1990s and 2000s and broaches the union's reactions to the introduction of elements of Industry 4.0 and the strategies formulated to ensure a just transition. The second part explores the union's proposals revolving around a »Union 4.0« and how these actions can serve as inputs to the IndustriALL Action Plan (2016-2020).² As for the Action Plan itself, we concentrate on three key points: *consolidating union power*, which has to do with recruiting and retaining members, then *structural and associational power*; *showing one's face to global capital*, which focuses on *institutional power* and unions' capacity to influence corporations, governments and international institutions; and *promoting sustainable industrial policies*, principally by using unions' *institutional power* resources to suggest cooperation and association with governments and employers in the making of an industrial policy that guarantees sustainable jobs.

The main line of argument is that, in spite of technological changes, unions continue to be important agents in the process of social modelling of new technologies, which are

¹ The term »just transition« first came up in 1995 in a presentation by trade unionist and activist Brian Kohler before the Great Lakes Water Quality Board of the International Joint Commission (IJC). In his talk, Kohler argued it was important to discuss a just transition so that workers were not made to pay the price of changes in forms of production and consumption for environmental reasons. Beyond the environmental question, the term is currently employed as a synonym for fair compensation for workers and municipalities affected by economic losses resulting from changes in production, like in Industry 4.0 (United Nations Research Institute for Social Development, 2018; candeias, 2011).

² About the IndustriaALL Action Plan, see <http://www.industrial-all-union.org/about-us/action-plan-of-industrial-global-union>.

neither uni-directional nor inexorable. And in this process of modelling, these actors have agency and the choices are strategic. In the case of SMABC, over time different contexts sketched out which power resources should be mobilised to deal with adverse situations. What may be said right from the start is that the *associational power* resource was decisive at several contentious moments during bargaining with both the VWB and MBB with respect to Industry 4.0.

2

THE FORGING OF THE SMABC'S POWER RESOURCES

Upon applying the framework of power resources to analyse SMABC's trade union action, one notices that over time power resources (*structural, associational, institutional and societal*) were combined and used in different ways as the need arose. SMABC is Brazil's second largest metalworkers' union. It possesses considerable infrastructure, and human and material resources. It has a legal department that advises members on both internal and external matters, the Memory, Research and Information Centre (CEMPI), two political/union and professional education centres (Celso Daniel Education Centre and Dona Lindu Free School for Integral Education), the Workers' Health and Environment Department (DSTMA) and a sub-section of the Inter-union Department of Statistics and Socio-economic Studies (DIEESE).

2.1 THE FOUNDING YEARS AND THE DEMOCRACY QUESTION/ STRUGGLE FOR DEMOCRACY IN THE 1980S

When the SMABC was founded in 1933, it represented a broad category of workers with little trade union tradition and under the tutelage of the State.³ Until the mid-1960s, SMABC's resources were largely related to *structural* and *associational power* due to the large number of workers in the industry. However, *structural* and *associational* powers were dealt a blow when the military staged a coup in 1964. By demanding a return to democracy in the late 1970s,

the ABC's metalworkers raised the struggle to a new level, above and beyond wage increases. They also demanded industrial democracy inside factories through the creation of shop stewards. SMABC's actions in these years also prepared the ground for workers' and unionists' engagement in the creation of the Workers' Party (PT) in 1980, in the organisation of the first factory committees in the 1980s (Ford in 1981, VWB in 1982 and MBB in 1984) and in the creation of the CUT Labour Congress in 1983.

By virtue of the context at the time, it is possible to observe how *associational power* was gradually built in conjunction with *societal power*. Step by step, the SMABC gained ground at the company level (with the factory committees), above the company level (with CUT) and at the societal level (with PT). The SMABC is one of the few unions that can rely on factory committees in every workplace – a reality that is very different in other regions in Brazil as a result of labour legislation⁴ – thus signalling a heightened degree of industrial democracy.

The strength of the union's *societal power* also manifested itself in this period through its involvement with social movements fighting poverty and in defence of public health care, with community associations in neighbourhoods and shanty towns, with the Catholic Youth Workers Movement (JOC), with the women's movement (which influenced the

³ Before automakers moved in, economic activity revolved around agriculture, furniture and textiles. Workers did have a certain level of trade union organisation, but the activity of the region's textile, furniture and railway workers was largely a repercussion of what happened in São Paulo (state capital). This setting changed when the first car assembly plant was set up there in the 1930s and trade union activity began to organise more intensely (PRAUN, 2012). In 1943, President Getúlio Vargas established a model of industrial relations in Brazil similar to state corporatism (Cook, 2007), which forged a form of state trade unionism (Boito & Steiger, 1994). This was anchored in a corporate union structure that rested on three pillars: *unicidade* (i.e., workers of a certain category in a certain location could only be represented by a single union); the compulsory »union tax«; and the interference of the Labour Courts in collective bargaining. Strong state supervision and intervention meant that to be official, unions had to obtain permission and certification from the Ministry of Labour by means of the National Registry of Trade Union Entities, hence the concept of »tutelage«. For more details, see Boito & Steiger (1994) and Melleiros & Steinhilber (2016). Regarding industrial relations in Brazil, see Jürgens & Krzywdzinski (2016).

⁴ The 1943 Consolidation of Labour Laws (CLT) did not make compulsory the formation of employee councils, but only the formation of bipartite committees (employer-employee) to prevent accidents (CIPA), which, once elected, have the task of identifying measures needed to prevent accidents in the workplace. However, the absence of legislation did not prevent unions from constituting factory committees via collective agreements, as in the case of SMABC. For more detail, see Lang & Gagnon (2009).

debates about gender inequality inside the union⁵) and people's housing movements. This synergy resulted in the introduction of direct participation mechanisms, such as the People's Councils, and in the universalisation of public policies like the Unified Health System (SUS), which was achieved in 1988. Cooperation with these movements and other civil society organisations allowed SMABC to generalise political projects for society as a whole and branded it as a practitioner of *social movement unionism* (Moody, 1997) by virtue of this new form of activism rooted in people's movements.

Incidentally, SMABC's action was not limited to the local/national level. The struggle against the dictatorship and the search for support for the factory committees stimulated the formation of international alliances with trade unionists from several other countries, such as the USA and Germany. The bonds of cooperation and solidarity established over the course of the 1970s and 1980s between SMABC and representatives of IG Metall were useful in terms of information exchanges regarding working conditions, and health and safety standards in Brazil, as well as to denounce involvement of VWB and MBB in the dictatorship, and anti-union and repressive practices (ARAÚJO, 2019). At the same time, local action taken in conjunction with international action ensured success in obtaining recognition for factory committees in the ABC region and in opening a structure for learning opportunities, especially with IG Metall's support in the 1990s, at a time when SMABC was modernising its trade union practices.

2.2 NEO-LIBERALISM AND THE DEFENCE OF JOBS AGENDA IN THE 1990S AND 2000S

The 1990s, also known as the neo-liberal decade, opened a period of defeats for the Brazilian trade union and workers' movement. The economic liberalisation sponsored by Fernando Collor de Melo (1990-92) led to profound changes in the economy (control of exchange rates and of inflation at the cost of high levels of unemployment, privatisation and low growth) and in labour relations (more flexible labour market and an increase in informal work), with a major impact on the automotive industry.

During the presidency of Fernando Henrique Cardoso (FHC) from 1995-2003, the SMABC's *structural* and *associational* powers were further debilitated to job reductions, the growth in informality, the restructuring of production processes and industrial relocation to greenfield areas. Over the course of the 1990s, it is estimated that SMABC lost 25% of auto assembly jobs as a result of industrial relocation and the fiscal war between states (JÜRGENS, Krzywdzinski, 2016). These aspects – which impacted the conditions of SMABC's (defensive) struggles and lowered levels of mobilisation – contributed to a crisis in the model of trade unionism and at the same time underscored the urgency of a newly agreed capital-labour relationship. While on the one hand companies demanded competitiveness through lower production costs, on the other, SMABC wanted to keep jobs in the region's factories. The defence of jobs and espousal of themes related to broader discussions involving public policies become central to the SMABC's strategy, with an influence on Brazilian trade unionism as a whole (Ramalho & Rodrigues, 2007).

These conditioning factors led SMABC onto a learning trajectory (cf. Martins & Rodrigues, 1999) and towards a modernisation of its trade union action. The union resorted to *institutional power*, without abandoning *associational power*, in different areas of its work. At the company level, with the proposal of reducing the number of strikes and seeking to carry out more bargaining, emphasis was put on strengthening workplace organisation – via the Company Union Committees (Comitê Sindical de Empresa – CSE)⁶ – as a mechanism to ensure pressure on a daily basis and continuous negotiation.

The move from conflictive action to one of partnership with employers and the State has a very clear objective: participating in discussions about investment and in strategic planning within companies and the region. In the case of companies, the SMABC hoped to safeguard factory jobs and spur future development with this strategy and by using its *institutional power*. In exchange, it agreed to negotiate previously taboo items (pay and benefits) as well as some new ones (profit-sharing, flexible hours, organisation and management of work, and safeguarding employment). Thanks to their understanding of the modernisation of trade union practices, representatives of SMABC felt compelled to get qualified to deal with the new setting of changes – above all technological changes – and with new discussions resulting from these, in order to intervene effectively in the company and government spheres.

⁵ Women played an important and leading role in the development of the metalworkers' trade union culture. The increase in women's rate of unionisation reflected their wish to participate in a predominantly male structure and brought specific gender issues into both factory and union. The effects were felt in the holding of the first women metalworkers' congresses (1978 and 1979), where women debated workplace inequalities (women on average earned 50% less than men), power relations (bosses' oppression and threats), the end of compulsory overtime, the banning of night work, nurseries and schools for their children, etc. The scope of these discussions later was broadened to the domestic and union spheres, gaining strength in the late 1970s with the creation of women's departments, which played an important role in bringing women together to discuss gender inequalities in labour relations and trade union practices.

⁶ Approved at the 2nd ABC Metal Workers' Congress in 1996/1997, the CSE is a merger of the Factory Committee with the CIPA, and functions as a kind of evolution of its predecessors. Inspired in the German co-management model, the CSE means that union representatives start sitting on these committees and having the power to bargain about specific factory-floor matters, collective agreements and profit-sharing. In the case of VWB, the merger generated the Unified Representation System (Sistema Único de Representação – SUR), and at MBB and other factories in the region, the Company Union Committee (CSE).

Concerning VWB and MBB, the mobilisation of *institutional power* took place through social partnership with employers and resulted in various agreements guaranteeing production, investments and the maintenance of jobs. Many agreements meant making concessions on the issues under negotiation (like industrial restructuring, organisation of work, flexible labour relations, reduction in the working week with wage reduction, etc.) in order to avoid arbitrary dismissals and a shrinking base. However, at several moments, many of the agreements were not complied with, leading to lawsuits, while many »guaranteed« jobs were lost (69% at VWB and 49% at MBB) implicitly via mechanisms like Voluntary Dismissal Plans (PDV) and layoffs. Far from being episodic, over the course of the 1990s and part of the 2000s this became the reality for SMABC, which tried to compensate for job losses from plant closures, displacement of production and automation in factories. Comparing the actions at the two companies, the consequences were much more aggressive in terms of dismissals and the introduction of flexibility at MBB than at VWB, and this can be explained by the growing salience of »shareholder value« in the Daimler group over the course of the 1990s (Araujo, 2019).

The international dimension reinforced SMABC's associational and *institutional power*. The understanding among trade unionists of various countries about how essential it was to stimulate international alliances to confront the excessive power of multinationals strengthened the comparison of common experiences and demonstrations of international solidarity. There was an almost »natural process« between SMABC and IG Metall thanks to the history of solidarity between the organisations since the dictatorship (interview 2, trade union representative SMABC/MBB). These closer relations facilitated learning on organisational matters and success stories from Germany, which were reflected in agreements guaranteeing local production and employment, flexibility instruments that took their inspiration *inter alia* from *Kurzarbeit* (like PPE) and reduced workloads (4-day weeks) at VWB and MBB.

Another experience that produced positive results for SMABC's local action was the creation and institutionalisation of World Works Councils (WWC), which was focussed on information and consultation between workers' representatives and companies' global management. For countries that do not have co-determination rights, access to information about companies' investment plans and decisions widens local unions' room for manoeuvre. SMABC unionists reported how the information obtained via world works councils was useful at VWB and MBB on various contentious occasions in seeking exit strategies during crises, including in the case of corporate whipsawing. In order to avoid displacement of production (Pernambuco and Juiz de Fora) and plant closures (VWB), the SMABC acted by proposing products (Fox, trucks), reconversion of factories (from passenger cars to trucks in the case of the Juiz de Fora MBB plant), new business deals and searching for other markets to solve domestic problems and maintain companies' competitiveness. This period of cooperation yielded 4 Transnational Collective Agreements (TCAs) at the Volkswagen Group and 2

International Framework Agreements (IFAs) at Daimler AG, revealing unions' capacity to act transnationally to promote arrangements establishing social and labour standards (Tables 1 and 2), i.e. institutional power.

Table 1 – Volkswagen Group Transnational Agreements

Table 1 Volkswagen Group Transnational Agreements		
Transnational Collective Agreements or »Charters«	Year	Objective
Social Charter	2002	Applies ILO principles to workers and suppliers of the Volkswagen Group
Health and Safety	2004	Prevents risks to health and safety
Sustainability, supplier relations	2006	Prescribes corporate standards for partner suppliers
Charter on Labour Relations	2009	Commits to establishing co-determination structures with employees

Source: Araujo (2019, p. 317), based on Withall et al. (2017).

Table 2 Daimler AG International Framework Agreements		
International Framework Agreements	Year	Objective
Principles of Corporate Responsibility	2002	Applies the 10 principles of the UN Global Compact, based on ILO conventions, to Daimler AG workers and suppliers
Health and Safety	2006	Provides for prevention and continuous improvement of working conditions

Source: Produced by the author

These instruments were incorporated in local negotiations between SMABC, VWB and MBB (as well as other companies) through the inclusion of social clauses that enhance labour rights like: stability for those persons eligible for retirement and for victims of workplace accidents; nursing care; equality of opportunities (same job – same pay); and against racial discrimination and child labour. SMABC exerted considerable influence on the elaboration of these legal frameworks, to the point of Daimler directors crediting the union with the introduction of the question of co-responsibility in contracts with subcontractors (interview 3, human resources representative, Daimler, Germany). Later, SMABC, working together with other Brazilian unions, created the National Councils, which had a similar design and were modelled on the WWC, with the aim of diminishing tensions between workers' representatives from different production units and reducing ideological differences between unions and labour congresses. This instrument made agreements and joint mobilisation possible among unions of different hues.

2.3 EXPANSION OF INFLUENCE UNDER THE »NEO-DEVELOPMENTALIST« REGIME

The negative matrix of forces faced by SMABC in the 1990s during the FHC presidency shifted to some extent during the governments of President Lula and, to a lesser extent, of President Dilma Rousseff. The close relations between SMA-BC and PT permitted more forward trade union and social demands. Offensive strikes, real increases in the minimum wage, formal job creation, strengthening of workplace representation, expansion of credit facilities and social policies among other things were important issues under the PT governments. This political link between the labour movement and the party consolidated a pattern of trade union action (cf. Ramalho & Rodrigues, 2018) that at the same time seeks to guarantee the specific interests of rank-and-file members and give voice to more general demands of the city and the region. This conjunction favoured the revitalisation of SMA-BC's *associational* and *institutional* power that materialised in public policies and collective agreements with real gains for workers and companies. From workers' point of view, the agreements achieved wage rises above the rate of inflation, new hiring, job security, higher profit-sharing pay-outs and other benefits. For companies they meant record sales and profits by means of industrial/sectoral policies, even in an atmosphere of international crisis, like in 2008.

The revitalisation of SMABC's capacity to intervene and wield influence can be seen in the proposal by *Inovar-Auto*. Similar to the Automotive Sector Chamber, the programme replaced the old automotive regime in force until 1999⁷ and constituted a reaction to a rise in luxury car imports (from 5% in 2003 to 24% in 2011). Seen as a protectionist measure (cf. Bicev, 2018) favouring unions by guaranteeing investments and jobs, and manufacturers established in Brazil, by ensuring their market position and high profit rates, *Inovar-Auto* was sanctioned in 2012 within the *Plano Brasil Maior* federal programme. Its purpose was to promote the dissemination of »people's cars« by making them cheaper and to strengthen the production chain through fiscal incentives (tax exemptions for vehicle producers that

guaranteed at least 65% of local content in assembly) and the expansion of credit. In return, the federal government demanded from manufacturers and importers investments in research, development, engineering and technology, participation in a programme of vehicle labelling and the establishment of targets for improving fuel consumption and emissions of pollutants.

Despite being controversial among researchers (Sturgeon *et al.*, 2016), the assessment by trade unionists of *Inovar-Auto's* effects on the densification of the production chain and on job creation is virtually unanimous. The programme was responsible for the establishment of new production units in Brazil, among them an MBB passenger car factory in Iracemápolis (São Paulo state). Later, MBB used resources from the programme to invest in a proving ground for commercial vehicles (trucks and buses) developed in Brazil and the Southern Hemisphere. According to MBB president Philipp Schiemer, these investments were made possible by the policy of fiscal incentives, research and development of the *Inovar-Auto* automotive regime (KUTNEY, 2018).

Another example of the strength of SMABC's *institutional* power can be seen at the international level, where it worked within the WWC with the support of representatives from Germany and other countries to reopen local negotiations regarding arbitrary dismissals at MBB in 2015 and 2016. Concomitantly with the revision of the Social Charter within the VW Group, SMABC also made its presence and influence felt in the formulation of the Temporary Work Charter, which, like at MBB, introduced the question of co-responsibility in contracts with outsourced companies.

Transnational Collective Agreements or »Charters«	Year	Objective
Revision of the Social Charter	2012	Revises the clause on remuneration and benefits for countries where there is no collective bargaining
Temporary Work Charter	2012	Commits to offering the same pay and rights to temporary workers
Professional Training Charter	2015	Commits to ensuring adequate conditions to apprentices

Source: Araujo (2019, p. 317) based on Withall *et al.* (2017).

7 With the end of the Automotive Sector Chamber in 1993, and given the fragilities of the auto industry in the face of the opening, several measures were adopted to rekindle an industrial policy for the segment. Many actions were taken by means of provisional measures (MPs) and decrees enacted by the federal government to contain the entry of imported vehicles and prevent foreign investments from being diverted to other countries (Argentina). Until 1999, the main incentive given to automakers established in Brazil was a reduction in import tax on vehicles, which had reached 50%; on parts, components and other raw materials the import tax rate fell from 85% in 1996 to 70% in 1997, 55% in 1998 and 40% in 1999. Corporations had to match these reductions by agreeing to a minimum 60% rate of national content and by linking their imports to their export performance. As well as this general automotive regime, in 1996 the federal government published MP 1532, which was later transformed into Law 9,440, creating special fiscal incentives for companies that set up production in the North, Northeast and Centre-West regions. The regional or special automotive regime made it possible for manufacturers to enjoy reductions of up to 90% in the Tax on Industrialised Products (IPI) when purchasing machinery and equipment in the country, along with other tax breaks. For more details, see Negri (1999).

While the neo-liberal 1990s were marked by a more defensive trade union agenda and a cooling down of *associational* and *institutional* power, with unions prioritising the workplace as a bargaining arena (cf. Melleiros & Steinhilber, 2016), PT's neo-developmentalists⁸ response, chiefly between 2006 and 2010 (Krein & Dias, 2017), facilitated a turning point in trade union action, with advances being proposed and actually achieved with regard to rights and pay. The period's low level of unemployment and social policies fa-

8 Regarding neo-developmentalists, see Boito & Berringer (2014).

voured the return to strikes and a renewal of *associational* and *institutional* power.

2.4 THE RISE OF THE RIGHT WING AND THE ASSAULT ON LABOUR RIGHTS

The rise of the (far) right in Brazil, the beginning of a period of reforms under President Michel Temer and the election of Jair Bolsonaro have once again put unions on the defensive. Reforms, the absence of an industrial policy and the loss of its capacity to influence public policies, both in the broader sense and those aimed at the sector, face SMABC with additional challenges with regard to the advocacy of a just transition in the face of 4IR.

The labour reform of 2017 (Law number 13,467) on collective action (*associational power*) and on the signing of collective agreements (*institutional power*) changed key elements of employment relations and trade union organisation⁹. The objective of the reform clearly was to weaken union power and ensure greater freedom for management. One kind of power with a high probability of being weakened with the reform is *structural (or economic) power* due to the introduction, or regulation, of atypical forms of employment contracts. The new hiring modes at the same time favour an increase in the precariousness of some of the old contracts, and make it possible for employers to dismiss and rehire workers as service providers/self-employed personnel without any kind of employment link, thus making it difficult for unions to represent them collectively. This difficulty in representation consequently impacts unions' *associational power*, by stimulating the fragmentation of workers' categories via outsourcing and atypical contracts, and *societal power*, with regard to strike action with a broad political agenda. The changes in trade union organisation constitute another hindrance to trade union action and may weaken unions' *institutional power* by allowing the weakening of collective bargaining as an instrument that ensures

⁹ According to Krein (2018), the labour reform changed key elements of employment relations and trade union organisation. In the first case, changes relate mainly to the approval (or regulation) of atypical forms of employment contracts, such as: 1) *intermittent work*, drawing its inspiration from British Zero Hour contracts; 2) *part-time work*, which has been increased to up to 32 hours/week, with the possibility of overtime; 3) *temporary contracts*, which have been extended to up to 270 days with no liability for employers in case of damage to workers' health; and 4) *employment relations disguised as self-employment*, like the Individual Micro Entrepreneur (MEI), the one-person company (PJ) and home office work. In addition, the reform allowed the *sub-contracting of companies' core activities*, i.e., full labour outsourcing, which regulated contractual forms that already existed in practice (temporary work, self-employed work, »PJs« and cooperatives). As for trade union organisation, some articles affect unions directly, like: the *priority of what is bargained over what is legislated* (i.e., allowing collective agreements with standards lower than what the legal framework stipulates); the *end of certain forms of trade union funding* without any type of transition (like the »union tax« and bargaining fees without workers' prior authorisation); the *regulation of workplace representation*, without the interference of unions or the State; the *exclusion of unions from individual contractual negotiations* for workers earning more than BRL 3,000 a month; and the end of unions' supervisory role in attesting to the correct termination of contracts.

social protection. This is owed mainly to the adoption of the principle of priority of bargaining over legislation, which permits the negotiation of watered-down agreements, and encourages individual contracts being negotiated without the assistance of unions for workers earning over BRL 3,000 per month.

Another factor worthy of mention is the structure of the Brazilian economy. At present, much of it revolves around the service sector, which accounts for 75.8% of GDP (cf. IBGE, 2019). Manufacturing and high technology industry for their part dropped from 36% of GDP in 1985 (cf. Arend, 2015) to 11.3% in 2018 (cf. Wolke, 2019), aptly reflecting a process of early-onset de-industrialisation in Brazil. Within this picture, research conducted by the National Confederation of Industry (CNI) as part of the *Indústria 2027* project has shown that only 1.6% of industries exhibit some level of digitalisation. Capital goods producers (machines and equipment), agro-industry and automakers lead the ranking of companies that use some technological level of Industry 4.0 with the aim of enhancing competitiveness by 2027.

Added to the factors mentioned previously, the absence of a government programme structured to support the development of Industry 4.0 creates an additional obstacle to SMABC's action. Proposals by the federal government, set out in the *Indústria 4.0* platform and formulated in consultation with sectors of the industrial bourgeoisie, contain measures to stimulate the development of this new concept in Brazil. SMABC is very critical of this set of proposals. It considers them to be vague. Neither do they guarantee development of Brazil's technological structure nor offer any meaningful job-creation prospects owing to a lack of matching measures from business. With regard to the proposed training programme, criticism coalesces around the broader difficulties involved in providing qualifications for workers. This is due to an educational landscape marred by low public investment, a situation further worsened in 2016 by the approval of Constitutional Amendment Proposal 241, which froze public spending on education, science, technology and innovation for 20 years. Brazil is thus going against the grain of an international movement to enhance workers' education and training as catalysts in the race for competitiveness.

The end of *Inovar-Auto* in 2017 and its replacement in 2018 by *Rota 2030*¹⁰ – a programme that lays down the rules for manufacturing and sales for 15 years – can be mentioned as an example of SMABC's weakening *institutional power*. Out of ten amendments presented by the union, only two were incorporated into the final draft of the project. For some analysts (Bicev, 2019), the union's reduced capacity to intervene in the project can be explained by its late entry into negotiations. In my view, this indicates an erosion of its *institutional power*, given the resistance of both government

¹⁰ Generally speaking, Rota 2030 is divided into 3 stages over 5 years. It sets the following new targets: energy efficiency for models sold, safety items, and compulsory technologies. For more details, see OECD (2018).

and business to accept the union's participation in the negotiations. The threat to its *structural power* is also evident, as the new programme did not commit to generating employment and even encouraged automation in production lines and the elimination of jobs. The union managed to remove the term automation from the text on the manufacturing process. This creation of uncertainties was enhanced by Jair Bolsonaro's announcements regarding the non-feasibility of a sectoral policy, which may well further dilute the project in terms of guaranteeing and creating jobs, consolidating national industry and providing incentives for research and development.

On the other hand, the effects of the labour reform reflect the political strength and resilience of SMABC's *structural* and *associational power*, translating into its ability to stop the inclusion of items from the new legislation in collective agreements. Evidence of this resistance can be seen in negotiations initiated in May 2018 at MBB. Faced with the company's refusal to renew certain items of the 2016-18 agreements – barring aspects of the labour reform, like the outsourcing of core activities and job security for the victims of workplace accidents – SMABC and the workers responded with strikes and demonstrations to pressure for a reopening of negotiations. Although wages and profit-sharing were also on the bargaining agenda, the social clause safeguarding workers from the labour reform was the key rear-guard action for SMABC. After 10 days of mobilisation, the draft agreement forwarded by the union was approved and the items blocking the labour reform were accepted. At VWB, elements of the reform were not included because the agreements there are long-term (2012-21). The »good and mature relations« between union and company was another explanatory factor mentioned in interviews by representatives of both parties for the non-adoption of the reform in the agreement, which could have been amended to include the reforms.

Beyond the long-term agreements and inclusion of clauses barring the labour reform, union leaders attribute their success to two factors. The first is their strong capacity to mobilise (*associational power*), which in their eyes, in a context of low growth, encourages management to try to avoid further economic losses as a consequence of strikes and other work stoppages. The second has to do with regulatory concerns. The legal insecurity surrounding implementation of the new measures of the reform would lead companies to act with caution. But as pending matters are gradually solved, the tendency would be for the »teeth of these companies to sharpen a little more« (interview 4, representative of SMABC/VWB).

3

INDUSTRY 4.0 AND THE JUST TRANSITION AGENDA OF THE 2010s

The year 2019 tested these two hypotheses plus the SMABC's capacity for collective action and making proposals. At MBB, the test began in June 2019, when the company officially announced the closure of four areas affected by the introduction of new concepts in the context of Industry 4.0: press shop and related areas; tool and dye shop linked to press shop; mechanic shop; and the outsourcing of production of axles and aggregates. After the company's announcement, SMABC approved a work stoppage on 14 June to agitate for the maintenance of jobs, a process of negotiation to that end, and to underscore a broader demand relating to the national pension system. It then organised debates and mass meetings with workers at the areas involved, as well as meetings with the VWC in Germany to gather relevant information for the local bargaining process. As an alternative to the closures, SMABC proposed that parts of the new generation of Euro 6 truck engines be manufactured. The agreement negotiated was approved, and with it came new products and investments to modify the areas to manufacture the liner, sleeve and axle shaft for the Euro 6 engine. The guarantee of investments and products, and the creation of new areas, permitted the preservation of the 300 jobs at risk plus the creation of 200 more.

The preservation of jobs and just and fair transition of these workers is the result of SMABC's *associational power* in the 2019 setting, but above all of its *institutional power* in 2013, leading to it signing the 2014 agreement that presaged the Industry 4.0-style transformations in the factory. In cooperation with Germans from IG Metall, the Brazilians learned from ongoing experience in Germany and, on that basis, sought to ensure the arrival of new products and investments to minimise the effects on jobs and influence the design of new occupations:

As far back as 2013, we started the discussion about Industry 4.0, actually in 2012/2013, in a process that began with the question of having or not having new products at the São Bernardo plant. This bargaining process took place in 2013. In 2014 we voted on the agreement. We spent a year and a half talking to our colleagues in Germany, from IG Metall, who gave us input on the matter, because Industry 4.0 was something very recent still and so we kind of studied the subject while we were at the same time already putting it into practice in the negotiation with Mercedes (interview 5, representative of SMABC/MBB/CNM-CUT).

The interlocutions and negotiations at local and international level ensured – through the 2012 agreement, which was renewed in 2014 – the survival of the brand's oldest factory (1956) in Brazil, considered a problematic and obsolete unit. It received major investments (BRL 500 million between 2015 and 2018) to revitalise old production lines, implement new ones (final assembly of trucks) with Industry 4.0 concepts, and open a new, totally connected cab factory with virtual reality resources, Internet of Things, data storage in the cloud, artificial intelligence and Big Data.

At VWB, the reconversion of the workforce to ensure a just transition occurred in another way, since the introduction of elements of Industry 4.0 remains at a modest level, according to the trade unionists interviewed. Digitalisation is taking place in the pre-production stage, i.e., in the development of the vehicle, in the simulation of production and in the ergonomic assessment, which permitted a reduction in the time taken to set up a line by 25% (cf. Ferraz, 2019), and by 9 months to develop a prototype. The reduction in the time needed to design the New Urban Coupé (a 100% Brazilian model) of almost one year is an example for the implementation of new concepts and the result of agreements reached to ensure more autonomy and regionalisation in the design of models with an export potential. These efforts ensured 100 new hirings for the areas of Engineering and Design, in addition to the 850 existing posts, and 400 for the assembly lines.

In spite of the advances in the guise of Industry 4.0 in some areas of the factory, for workers' representatives what is taking place is a *deepening of automation* in others, as occurred with the arrival of the new global platform (MQB).¹¹ In order to operate MQB, new investments were necessary in the old areas of press, body shop, painting and final assembly, in other words, more automation. This occurred along two paths: in areas already well robotised and in others with little automation. In the first case, the accentuation of automation took place in the *press* and the *paint shop*, whose work

¹¹ »There is an important thing regarding the automation issue not connected simply to Industry 4.0, but to the implementation of global platforms. Global platforms end up pulling along a whole lot of other technologies that come together. Not everything comes, because much of it is more expensive, which would make the product even more expensive, but you do bring a lot of stuff with the platform« (interview 4, representative of SMABC/VWB).

was indirectly impacted. In the press shop, the activity of feeding in and taking out parts was eliminated through the acquisition of a new set of presses (PXL). And in painting, workers dealing with customisation were no longer needed. For its part, areas where there were previously low levels of automation were mainly to be found in the *body shop*, which meant elimination of a significant number of workers to host the production of new models (Virtus and Polo).¹² As an alternative to unemployment and to maintain jobs, the SMABC and workers' internal representatives proposed the insourcing of some jobs to reallocate personnel. The company agreed and the proposal was incorporated as an amendment in 2015,¹³ thus avoiding 800 job losses.

ures ensured that at the tool and dye shop old jobs were kept and not outsourced, and new jobs were created.

The *tool and dye shop* was also a subject of automation, but with the insertion of some elements of Industry 4.0. At the end of 2011, the union organised mass meetings with workers to discuss strategies for investments in the factory. In March 2012, union reps travelled to Wolfsburg to debate solutions to make it more competitive and ready to receive new models. The intention of the trip was also to obtain inputs for the Local Productive Arrangement (*Arranjo Produtivo Local* – APL),¹⁴ so as to drive the sector in the region, which is strategic both in the sense of employing a large share of SMABC's rank-and-file and for national industry generally. Later, these measures led to the incorporation of proposals into *Inovar-Auto* to strengthen tool and dye shops in the *ABC paulista*.

As a consequence of these arrangements, the union and the company's global management reached an agreement in 2012, earmarking BRL 65 million for the acquisition of machines and workers' training to develop new knowledge/skills and exchange information with headquarters. With the allocation of this money to new machinery and the opening of a learning cell at the tool and dye shop, after 11 years without any intake, professionals were hired, mostly younger and schooled in the parameters of the new technologies (some going to university), and also 6 SENAI apprentices per semester were taken on. Older workers were re-qualified up to the limit of 475 full employees. Another tranche of investments was received in 2018 (BRL 30 million). This facilitated the opening of two milling centres and the installation of a third piece of equipment to stamp large-scale parts, a process that is still ongoing. These meas-

¹² The MQB platform was the solution bargained by SMABC to guarantee new investments (Polo and Virtus) and the survival of the factory in the region – since practically half of the production would cease to exist with the end of the fourth generation Gol and of the Kombi – in exchange for restructuring programmes to adapt the workforce to the new, leaner lines.

¹³ 520 jobs were insourced, and distributed as follows: movement of new vehicles in parking lots (132 jobs formerly provided by Tegma, 46 by Standprogramm and 244 by Julio Simões); operations related to parts and accessories (17 jobs); messenger services (13 jobs); tool washing (10 jobs); locksmiths (3); fleet administration (13 jobs); and drivers (42).

¹⁴ The APL was a movement initiated in 2011 by SMABC in association with small and medium-sized tool and dye shops, ABC city councils and employers' organisations to propel the competitiveness of the region's mould and tool sector against imported parts and tools.

4

SMABC PROPOSALS FOR A »TRADE UNIONISM 4.0« AND THE INDUSTRIAL ACTION PLAN

Even though it is impossible to assess the direct effects of the labour reform and of (the absence of) industrial and economic policies on new agreements, the examples of negotiations at VWB and MBB reflect the strength of SMABC's *associational power* (which was decisive in several situations) and *institutional power* at the company level and, to some extent, at the political level. These are factors that have greatly influenced the development of Industry 4.0 in the region and the country. From this perspective, workers' representatives have sought paths forward to implement a just transition and administer the implications of technological unemployment, thus opening up new opportunity structures for the renewal of SMABC's trade union action and organisation.

One structure that is open and linked to labour reform has to do with the end of the old model of trade union funding and the opportunity to carry out union *organisation* and *reorganisation* to reduce competition, increase the number of paid-up members, reach non-unionised categories of workers and strengthen workplace representation. Given that the end of the union tax (compulsory contribution) accounted for a 90% drop in total revenues (from BRL 3.64 billion in 2017 to BRL 500 million in 2018), many unions have considered a *merger strategy*, espoused by part of the labour movement for a long time. SMABC is a supporter of mergers, but not as resistance to financial strangulation – although its own revenues from the tax also fell (from BRL 5.94 million to BRL 46,000) in the first year of the reform¹⁵ – or as an enhancement to union density. The proposal under discussion, approved at the respective congresses of SMABC, of chemical workers at the state and national levels, and of CUT is to form unions in each macro sector, which in the case of SMABC means merging with unions representing chemical, electricity, garment, construction and food processing workers. Beyond these aspects, the potential of the merger resides in an increase in the capacity to mobilise and, therefore, in *structural* and *associational power*. The emphasis on collective action stands out in the speeches of unionists when they contrast this logic with the tactic of financial survival advocated by smaller unions, which they claim is not the case with SMABC:

A large part of this union's (the SMABC's) revenue comes from members, so it is not yet despairing because of the trade union contribution. If you take another of the larger unions, like the chemical workers, then we wouldn't need to think about absorbing the small ones. *But this has to do with representation*, has to do with bringing more people together. *With you fighting collectively*. Why is our contract expiry date in one month, of the chemical workers in another, of the textile workers in another, of the print workers in another? Why don't we do it all together? You'd create a pandemonium. It has to do with that, with that thing »workers of the world, unite«, I don't know, but we haven't understood this yet (interview 4, representative of the VWB and SMABC).

In fact, mobilisation as an instrument to forge common objectives and unite forces finds expression in policies to build trade union networks/national councils of SMABC and the National Metal Workers' Confederation, affiliated with CUT (CNM/CUT), as a way to overcome the effects of the fragmentation brought about by the trade union structure. The advent of Industry 4.0 only reinforced the essential character of mergers in strengthening *structural* and *associational power* as resources to tackle abusive practices and unfavourable negotiations.

Linked to restructuring and the capacity of mobilisation, another opportunity opened up through *organisation* has to do with the dimension of *representation*. With restructuring processes and a shrinkage of the traditional blue-collar base, discussions about the representation of white-collar workers have gained ground. This has been the case especially since the survival of SMABC and its rank-and-file (Rodrigues, 1997) came to be interpreted as a function of the maintenance and future of the region's factories, even if to that end they had to agree to some level of automation. In 1987, SMABC had 203,111 members; by 2018, this figure had dropped to 70,078, a reduction of 65.5%. Of the total number of members in 2018, 23,720 worked in auto assembly (33.84%), with large concentrations at VWB and MBB (69.24%). According to a survey based on the Annual List of Social Information (RAIS), between 2003 and 2018 the forecasted elimination of current production-related occupations in the major auto companies of the ABC is around 59% (more or less 5,000 jobs), while the same indicators show an increase in the number of non-manual jobs from

¹⁵ <https://economia.estadao.com.br/noticias/geral,sindicatos-perdem-90-da-contribuicao-sindical-no-1-ano-da-reforma-trabalhista,70002743950>

35% to 42% of the total. Surveys of this nature underscore SMABC's need to turn towards this universe of workers that is tending to expand as a result of the new occupations created by Industry 4.0, but with a different profile: more female and younger workers (generation Z). The data from RAIS indicate increases in numbers of women in non-manual jobs (13%) and leadership positions (between 120% and 540%). The number of women in production-related posts has grown little (22%) or even shrunk (by 7.2% in certain positions). In terms of remuneration, gender inequality remains, and there is little female presence in leadership posts in the sector as a whole.

Aware of such diagnoses, SMABC cites the difficulty in recruiting and organising white collar workers in general, and women in particular. In the union's view, this is due to numerous factors, from people not identifying with the interests promoted by the union, to its own leaders' reluctance in organising and renewing their style of activism. These are questions that, although not new – and constituting one of IndustriALL's pillars of action (*consolidate union power*) – make up the arsenal of motivations to renew union recruitment and organising. This is the case even if the gender dimension is rather marginal within the union's proposals and negotiations, as shown by Table 3 – and gender inequality may well deepen with Industry 4.0. With reference to negotiations at VWB and MBB, the agreements signed have advanced little beyond themes linked to women's reproductive rights (pregnancy, motherhood and abortion), with some workplace gender equality initiatives (same work – same pay). Many of the clauses in the agreements remain connected to the idea that women have a larger share of the responsibility in caring for children, a situation that is unfavourable to equality in terms of family responsibilities. Neither is there any incentive to train and qualify women, and the fight against moral/sexual harassment lacks sanctions (companies merely »reject« harassment in their texts/rulebooks). Therefore, it can be said that SMABC (like the IndustriALL Action Plan) lacks concrete proposals to reach administrative areas, particularly women and self-employed workers, who, as mentioned, will probably become more numerous. In this regard, an examination of the experience of other countries might help the union better cope with this development.¹⁶ On the other hand, the examples of VWB and MBB nevertheless demonstrate that collective action has been decisive, and more effective than negotiations, at several moments of contention involving arbitrary dismissals, non-compliance with agreements and against corporate whipsawing.

The question of organisation is intertwined with the new forms of hiring that are often replacing employment relations with customer-supplier relations, thus making it even more difficult to recruit and identify the interests of a contingent of employees that have become (or are yet

to become) »anonymous«, more individualised and hard to access. Transmuted into service providers (one-person companies – PJs or individual micro-entrepreneurs – MEIs), generally involving more than one company, without a fixed workplace (crowdworking), with no separation between the private and public spheres (home office) and without formal employment rights, this (dis)organisation and the new labour market regulations are posing challenges to workers' organisation:

The home office is only part of it. You have, for example, a guy who works from home for both Mercedes and Ford. There are non-disclosure agreements, because he works for both companies. The guy is no longer exclusive. We don't see him inside the factory, there are sectors that have PJs, home office we don't have, but there are MEIs. The guy left the factory, took a redundancy package, left. Soon enough he's working for the factory. The factory contracts a CNPJ [company registration number]. It contracts a company, just like with bank workers. It's the same guy. We have the same problem as the bank workers, many people left the sector, as bank workers, but they work under other guises. These guys didn't cease to be bank workers, the problem is that the bank workers have to solve the problem of representation. In our case, these people didn't cease to be metalworkers; the problem we have to solve is the problem of representation (ditto).

Reacting to these expected changes, SMABC has worked within a set of proposals to reinvent itself, in the direction of becoming a »Union 4.0«. One of these consists of promoting *Training 4.0* for union leaders to be able to operate in this setting of ongoing transformation. The intention is for workers' representatives, equipped with more technical qualifications, to manage to identify even minimal technological interventions, assess the impact on jobs and propose alternatives to safeguard them, based on the factory's future investment decisions. Historically, SMABC has worked to educate its leaders, but with a political focus. So, for SMABC representatives, courses would help fill a gap identified in collective bargaining. Many courses and lecture series were held over the period 2017-19 on issues relating to Industry 4.0.

The education project is consistent with another action proposed by SMABC representatives: *induce investments* and *diversify business*. Given the small number of investment announcements by the major auto companies of the ABC, and the accelerated process of de-industrialisation, union leaders believe that partnering with employers in the process of technological implementation is the key to maintaining companies' longevity and, consequently, ensuring a just transition. Adopting the view that technological processes are inexorable, they have concluded that the permanence of production units in the region depends on the union's action, whether open to participation or closed to innovations. They jointly cite the prospect of greater business diversification, i.e., going from mere vehicle manufacturers to service providers in the automotive field, since the possibility of producing electric cars seems remote because of the

¹⁶ Schröder *et al.* (2017) present some regulatory perspectives for modes of work considered self-employment, and what strategies IG Metall has been applying to reach this group of workers. For more details, see the authors' citations.

09/12/2019	Discussion about new forms of work and precariousness as part of the Cycle of Debates <i>The ABC of Industry 4.0</i>
05/12/2019	Participation of SMABC in the Chamber of Deputies' Committee on Economic Development, Industry, Trade and Services seminar in defence of industry and jobs
03/12/2019	Promotion of the <i>Most Competitive Brazilian Tool and Dye Shops</i> workshop in defence of the destination of resources from the <i>Rota 2030</i> programme for professional training for workers and development of Industry 4.0
14/11/2019	5th Cycle of Debates <i>The ABC of Industry 4.0</i>
29/10/2019	Training course at VWB about precarious labour relations and Industry 4.0 promoted by the SMABC Collective on Industrial Policies
27/08/2019	3rd Cycle of Debates <i>The ABC of Industry 4.0</i>
16/08/2019	Participation in the 44th Meeting of the ILO Technical Committee/Cinterfor to discuss professional training for Industry 4.0
26/07/2019	International Cooperation with IG Metall about Industry 4.0, maintenance of labour rights and the importance of trade union networks
18-20/07/2019	9th Congress of the ABC Metal Workers
03/07/2019	Participation of young VWB workers from the ABC Metal Workers' Youth Collective in the International Youth Course on Industry 4.0 hosted by Nordic IN
30/04/2019	1st Cycle of Debates <i>The ABC of Industry 4.0</i> promoted by the SMABC Collective on Industrial Policies
16/04/2019	Debate at the SMABC union hall with workers about the impact of Industry 4.0, the development of national industry, professional training and just transition
03/04/2019	First visit to MBB by the collective created by the SMABC for industrial policies, to get to know advances in Industry 4.0
21/04/2019	CSEs that make up the SMABC Board attend Leaders' Training Course
15/02/2019	Training aligned with Industry 4.0 through <i>Union and Citizenship</i>
07/11/2018	Participation in public hearing at the Ministry of Labour to debate the future of work and professional training in Industry 4.0
08/2018	Conclusion of the first three CSE classes in the Leaders' Training Course
03/04/2018	Creation of the Collective on Industrial Policies and visits to factories that are advancing digitalisation
07/03/2018	Meeting with the International Labour Organization (ILO) to amplify the dialogue on the development of industrial policies in Latin America
17/10/2017	Debate at the SMABC union hall with the secretary of Industrial Development and Competitiveness of the Ministry of Industry, Foreign Trade and Services (Mdic) about questions relating to the recovery of employment, electro-mobility, Industry 4.0 and <i>Rota 2030</i>
19/09/2017	Discussion about the challenges of Industry 4.0 in partnership with the University of São Paulo (USP) during a meeting of the union's executive
12/09/2017	First regional technical meeting on Industry 4.0 in Brazil with the Ministry of Industry, Foreign Trade and Services (Mdic) and representatives of the seven municipalities and universities of the ABC
22/08/2017	Request by SMABC to include the professional training theme in the <i>Rota 2030</i> Working Group on Research, Development and Engineering

Source: Produced by the author.

period of exploitation of the production platforms (interview 4, representative of the VWB and SMABC). While labour costs are low enough that automation is not on the agenda, this prospect will remain. For its part, business diversification would aim at occupying consumer market niches not yet explored by the auto companies. Services offered via mobility apps would capture a generation more familiar with using these resources and that displays little inclination to purchase cars.

At the international level, SMABC's actions to spur investments and reopen local negotiations at VWB and MBB are also worthy of mention. As has been shown, the *institutional power* resource on this scale was mobilised to reinforce cross-border alliances that ultimately translated not only into new investments, but also into international framework agreements/transnational collective agreements that were helpful in local negotiations. This practice by SMABC corresponds to what one would expect from a brand of transnational trade union action able to *show its face to global capital*, as laid out in the IndustriALL plan that proposes the creation of international cooperation instruments, like world works councils. Despite constituting an important step towards what many think is a new workers' internationalism, one must consider the possibility that such instruments, instead of combating competition within and between factories, may end up fuelling disputes over investments between unions. Therefore, the major challenge continues to be formulating common objectives and a common identity that transcend the national logic.

In order to bring about investment and induce business diversification, SMABC stresses the paramount importance of *public policies* to stimulate national and regional industry. Beyond a critique of the lack of a state policy to think about Brazil's role in the technological development route, SMABC has put pressure on government and worked to present proposals in conjunction with other unions, like *Plano Indústria 10+*,¹⁷ as well as create collectives (such as the Collective on Industrial Policies) exclusively aimed at devising policies to strengthen industry as a whole. The loss of its ability to influence the decisions of the current government (*institutional power*) and the lack of state incentives have led the SMABC to a renew its links with academia and society, i.e., a return to *societal power*.

Lastly, and intertwined with all the others, professional training and re-training assume a special role in SMABC's strategies. Organised around an *Education 4.0*, the pro-

¹⁷ *Plano Indústria 10+* is a set of 6 guidelines (ensuring a consistent process of technological innovation and modernisation; industrial policy aligned with environmental protection; re-densification of production value chains; sovereign foreign policy that promotes national industry; promoting regional development; quality jobs) proposed by the labour movement to orient the federal government in planning to formulate policies, programmes and actions relating to Brazilian productive and technological development over the next 10 years. The point of departure in the proposal is workers' vision, and is connected with the project of economic and social development that seeks to improve quality of life, reduce inequalities and distribute income for the population in the different regions of the country.

posal is to debate permanent education policies capable of meeting the requirements of the new jobs created by Industry 4.0. SMABC's activities range from partnerships with educational institutions (SENAI) to direct interventions in training courses (extension at universities like Santo André and FEI). Beyond the formal system, SMABC has sought ways to consolidate its own education project so it cannot be »held hostage« by corporations or *Sistema S*.¹⁸ In this regard, the Collective on Industrial Policies has set out for itself the mission of discussing in-depth issues like start-ups, the app economy, knowledge management and patents.

SMABC's proposals to induce public policies link in with the IndustriALL Action Plan aimed at *sustainable industrial policies* with regard to the defence of the *institutional power* resource. As stressed earlier, SMABC has directed its activities more towards companies' internal spheres, whether at the local or international levels, in the face of its feebleness in negotiating with governments an effective industrial policy able to generate jobs that are above all sustainable. In the absence of a broader pact for jobs, the union is seeking partnerships with formal educational institutions to deal with the prospect of change in workers' profiles. But as in the case of the IndustriALL Action Plan, SMABC has not set out alternatives to recover *societal power*, despite counting on bridge-builders inside the institution. It is not possible to talk about sustainable employment, or green jobs, without discussing ever more precarious labour relations and the gender dimension behind them (thanks to women's movements). The fight against poverty cannot justify blind environmental destruction (credit to the environmentalist movement). Environmental protection cannot be erected at the cost of thousands of workers losing their jobs (labour movement). From this angle, coalitions and alliances with different social subjects can be very useful in unions' efforts to recoup their importance and social protagonism, based on a platform of common struggles and aspirations.

¹⁸ Created in 1942 during the Vargas Era, *Sistema S* (S System) is made up of a series of institutions and organisations offering vocational support and training/professional enhancement geared to various fields, like industry (Senai, Sesi), commerce (Senac, Sesc), agri-business (Senar) and workers themselves (Sebrae, SESCOOP, Senat). The system is maintained through a compulsory contribution paid by companies, with rates varying between 0.2% and 2.5% of the payroll, depending on the type of business and the tax regime chosen.

5

FINAL REMARKS

Without intending to contribute an exhaustive discussion on an exceedingly complex topic, I have tried to demonstrate how unions from peripheral capitalist countries like Brazil have been working to respond to the changes wrought by Industry 4.0. In the case of SMABC, it is possible to trace out how the organisation gradually mobilised several resources over the course of its history to meet the demands of the times. In the 1980s, the clash with the military dictatorship prompted SMABC to rely on *structural* and *associational power*, thus forging a *social movement unionism*, based on its capacity to build coalitions with social movements (societal power). Since the 1990s, however, rationalisation in the economy and automotive companies have imposed changes upon SMABC's logic of action. Motivated by the defence of the jobs agenda, SMABC representatives utilised *associational* and *institutional power* to realise this series of demands. The international context of Industry 4.0 as well as domestic issues placed a series of additional challenges before SMABC above and beyond the mere safeguarding of jobs. The just transition presents itself as a categorical imperative for the very survival of the union in the face of the threat of elimination of its traditional worker base. But it is not enough to discuss a transition to the new occupations being created. It is urgently necessary to take into account its real effects, which brings two additional kinds of problems to the surface. The first relates to what in fact this new revolution means: more free time, as predicted by Gorz (1982)? Or more exploitation of labour? Implementation of new technologies or disguised automation? As highlighted by Staab & Butollo (2019), there are many alarmist reports prophesising the disappearance of occupations and, by focusing on technological strategies, obfuscate and distort the debate about economic policies that impose low wages and precarious working conditions.

Any industrial union directly experiencing these transformations should be guided by these questions when debating revitalisation. SMABC, like any other union, will not disappear – as long as capitalism exists – but will have to adapt to the new order. To this end, it is clear that *institutional power* as well as the partnerships with government and employers will not be sufficient to meet the demands of a »unionism 4.0«. In settings marked by negative developments, *associational power* has been decisive at contentious moments. And, more than ever, this is necessary to recover *societal power* and the capacity to enhance social prominence with wide-ranging proposals that respond to the aspirations of sections of the new working classes – more female, younger and working under more precarious conditions.

The urgency surrounding the need to regain social prominence became particularly evident at the time of this article's writing, as SMABC was being confronted with difficulties in making the federal government accept its proposals to combat Covid-19 in Brazil and maintain jobs in the region. Under conditions of such an unprecedented crisis, the union is once again challenged to become a societal force that fights for the rights of all working people.

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ABOUT THE AUTHOR

Ariella Silva Araujo. Post-doctoral student in Political Science at the State University of Campinas (UNICAMP). PhD in Social Sciences from the same institution; visiting researcher at the Centre for Studies in Trade Unionism and Labour Economics (CESIT) of the Institute of Economics (IE), UNICAMP; former visiting researcher at Wissenschaftszentrum Berlin für Sozialforschung (WZB).

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DEPLOYING HISTORICAL STRENGTH TO SHAPE THE FUTURE

SMABC and Industry 4.0 in the Brazilian automobile sector



This article aims to discuss the power resources that the Sindicato dos Metalúrgicos do ABC (SMABC) have been mobilising to deal with the effects of changes brought about by Industry 4.0, specially at Volkswagen do Brasil (VWB) and Mercedes-Benz do Brasil (MBB). The choice of SMABC is owed to its political importance as a catalysing agent of workers' and social movements' concerns vis-à-vis the dictatorship in Brazil, and for having become the cradle of the trade unionism of the CUT (Unified Workers' Central); while the choice of the German automakers is owed to the leading role they have been playing in the process of digitalisation of their factories. SMABC gradually mobilised several resources over the course of



its history to meet the demands of the time. In the 1980s, the clash with the military dictatorship made SMABC resort to structural and associational power, thus forging a social movement unionism. From the 1990s to 2000s, due to rationalisation in the economy and automotive corporations, SMABC utilised associational and institutional power to implement a jobs defence agenda. Since 2010, the international context of Industry 4.0, put a series of additional challenges. Considering these aspects, we examine two central questions: how have SMABC's power resources reverted in its favour in terms of collective bargaining and agreements? How can studying SMABC help in the formulation of an IndustriALL action plan for 21st-century unions



in the automotive sector? Overall, the findings highlight that just transition poses itself as a categorical imperative in the face of the threat of elimination of its traditional base. SMABC, like any other unions, will not disappear but needs to adapt to the new order. It is clear that institutional power, and also the partnerships with government and employers, is not sufficient to meet the demands of a »unionism 4.0«. In settings of negative correlation, associational power was decisive at contentious moments. And, more than ever, it is necessary to recover societal power with wide-ranging proposals that respond to the aspirations of sectors of the new working classes: more female, younger and working under more precarious conditions.

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