

CHAPTER ELEVEN

THE STATE'S ROLE IN THE TRANSFORMATION OF PRODUCTION RELATIONS IN EUROPE

ON THE CONSTRUCTION OF WARSHIPS AND THE RISE OF CAPITALISM

1. Introduction

In this chapter I will endeavour to sketch the role of the state in acting as production organiser and as purchaser of arms and armament systems in European history. This role of the state's is parallel to, yet should be clearly distinguished from the state's role as collector and centraliser of a society's economic surplus. Both roles surely are economic roles. Yet whereas the state's latter function has primarily affected the formation of loan capital and capital markets during the period of rising capitalist states, in its former function, as patron of arms' production, the state has had a significant impact on the transformation in the relations of production, and on the social division of labour during the transitional 'manufacturing' stage between the preceding artisanal and the subsequent factory-based production. For in bringing production tasks which had been localised during the Middle Ages, under the roof of *arsenals* directly managed by state-functionaries; in centralising and redividing skills which in former days had been performed in combination by individual artisans, the state gave direction to the social transformation that ultimately was to lead to the factory-based organisation of labour.

In delineating the state's role as organiser of military production, my primary focus of attention will be the construction of warships, in particular those two types of warships which successively have dominated European sea warfare in the period between the end of the Middle Ages and the Industrial Revolution, namely the fighting galley and the sailing galleon. The building of both types of warships required the allocation of huge amounts of wood, - a circumstances which led the state to intervene and give direction to the extraction of this strategic raw material from forests. And whereas initially, when cannons were first placed on ships to enhance their destructive power, the warships of the rising European powers, called 'men-of-the-war', were hardly distinguishable from their civilian counterparts, the 'merchantmen', - the configuration of warships became increasingly specialised. Moreover, the sheer size of the warships, built for instance by Great Britain in the 17th and 18th centuries was so large, that this circumstance in itself exerted an influence on the scale of production deemed conceivable.

The empirical evidence available for an analysis of the state's role as organiser of arms' production in history is, to my knowledge, rather limited. Whereas elaborate research has been undertaken, for instance, to shed light on how the state has impacted on the formation of capital markets, - no systematic record or comprehensive analysis exists regarding the operation of *arsenals* under rising capitalist states. An exceptional source of knowledge is the work of the German author Werner Sombart, who was keenly aware of

the close interconnection that had existed for long between inter-European wars on the one hand, and the growth of capitalism on the other (1). Alongside Sombart's overview regarding arms' production and military procurement and the effects on various branches of production, there exists at least one detailed historical study regarding the production process in the state's *arsenal* (2). These and other sources do suffice to show that both classical and critical economic theory have underestimated what impact the state has exerted in shaping capitalist production relations. Much historical research, however, is yet to be undertaken, before a systematic account can be given regarding the topic addressed in this chapter.

It is nevertheless quite well possible to initially evaluate the meaning of the state's organising and purchasing role. For there is sufficient evidence to show that the role which the state has played vis-à-vis military production from the period of the flourishing of the Italian city states through to the end of the laissez-faire period of capitalism, has been no less intrusive than that which the state was to reserve for itself during capitalism's monopoly phase. For in spite of variations in patterns in the organisation of military production, throughout the period of capitalism's rise the state remained a direct participant of the economic process. It at times even appears to have exerted a direct and qualitative impact on the formation of Department I, the Department for production of the Means of Production (**MP**) (3). Hence, the function of the state in European history can in no way be reduced to that of revenue collector alone. Through the whole transitional, 'manufacturing' period, it has decidedly fulfilled an economic *double-role*.

2. Venice: State-Guided Production of Arms

To start, I wish to focus on the production of warships in the *arsenal* of the Italian city-state of Venice which experience has been well researched by Frederic Chapin Lane (4). This example is very revealing, and this in more than one way. The *arsenal* by the middle of the 16th century could boast of a truly long experience. Founded in the later part of the 12th century, it had seen two major expansions in size. By the period highlighted by Lane, it had become a production complex, consisting of many dry docks, gun foundries and foundries of iron smiths, shops for other artisans, a big lumber yard and other storehouses for raw materials, etc. The *arsenal* was both a production centre for the manufacturing of galleys and arms, it offered space for the storage of warships until they were needed by the state, and it also made the assemblage of the ship's parts possible. The size of the labour force is stated to have been 1 to 2 thousand persons, a very large number of collective labourers for any production site at this point in time. In view of its significance for Venice, the *arsenal*, according to Lane, was considered to be the very power base of the Italian city-state (5).

The rulers of Venice exercised a direct influence over the *arsenal's* functioning. A part of the responsibility for running production was assigned to functionaries appointed by the city Senate. Thus, Lords of the *arsenal* closely supervised book-keeping, organised the collection of funds, and were also in command of purchases of all the required supplies. They were preoccupied with the *arsenal's* financial management. The Commissioners were entrusted with the task of informing the city-rulers of the *arsenal's* needs, and the Admiral was formally responsible for supervision of the whole production process. He seems to have taken charge, amongst others, of the final stage of

production, i.e. the assemblage at the timings when the galleys had to be readied for the sea. Yet the Senate and the Council of Venice themselves actively participated in the management of the *arsenal*, taking decisions for instance on the number and the pay of the *arsenal*'s foremen and master artisans (6). There is, then, no doubt that the *arsenal* was not only formally owned by, but was also run by the Venetian city-state.

Further, the existence of the *arsenal* not only signified that the state held influence over arms' production, but in fact implied a much broader impact of the rulers on the economy of the city. Whereas previously, production of war galleys had partly been subcontracted to owners of private wharfs, by the 16th century all construction of such galleys occurred inside the production complex of the *arsenal*. There was just one single production centre for the building of fighting ships, and it was under state-patronage. Moreover, the *arsenal* held supplies of timber which were not only used towards the *arsenal*'s own processes of manufacturing, but were also sold to private builders of galleys, that were destined for the transport of civilian cargo. The state, in other words, was not only active as an organiser of military production. It even played a role as supplier of raw materials to capitalists belonging to the city's incipient 'Departments' of Production (7). Hence, the Venetian city-state should be assessed both as a revenue holder, as central organiser of military production, and as a seller of means of production (MP) to capitalists manufacturing civilian goods.

The latter was only possible thanks to the state's direct management of forest resources. Since the continuous supply of lumber was so crucial to the *arsenal*'s functioning, the state did not wish to rely on any rural region that was not under Venice's dominance. Further, the rulers of the city organised the cutting of wood through agents it itself appointed. The private felling of trees wanted by the city was banned, and trees were marked to indicate that they were to be cut exclusively for employment in the *arsenal* (8). Thus, the case of the Venetian *arsenal* shows that during the period of capitalism's rise, the state tended to act as both a direct agent of arms' production and as supreme industrial entrepreneur. The example also brings out that the state sought to avoid dependence on the provision of means of production by the capitalists of the incipient Department I. Since the state itself organised the supply of oak and other wood to the *arsenal*, it to an extent did away with the need, even, to maintain a non-reciprocal relationship with capitalist owners belong to the incipient 'Department' for production of the Means of Production (MP).

3. A Cooperative Form of Artisan Production

Let's now look briefly at the labour process as it was shaped in the *arsenal* by the 16th century. By this time, a significant production speed had been developed, ensuring that some 30 warships could be built in half a year's time, and that galleys could be assembled rapidly whenever the threat of war loomed large. Frederic Lane distinguishes three basic stages in the construction of a galley in the *arsenal*. In the first stage, the keel was laid and the framework of the ship was built. All the jobs in this stage were performed by the shipwrights and other carpenters. Next, the planks were fastened into place, and the cabins and other superstructures were built onto the hull. Here, there was work both for the artisans known as the caulkers, and for the ship carpenters. In the third stage, the seams were filled with tow and pitch, a job which once again was that of the

caulkers. The oars and other equipments too were added to the ship. According to Lane, whereas the first production stage was completed in only one section of the *arsenal*, all the sections were involved in the third, the final stage (9).

The organisation of production in the *arsenal* in the 16th century well reflected the fact that it found its origins in the craft-based production of the Middle Ages. A key position was held by the shipwrights, the master carpenters. Originally they had continued maintaining their independent workshops, even while being employed in the *arsenal* on a part-time basis. But by the 16th century, they had become employees who were fully preoccupied with building warships. Along with other masters who were dependent on state-employment, they were known as the *arsenalotti*. Yet they continued to function as master artisans, each being assisted by their own apprentices. On the other hand, the autonomy of the master carpenters was limited by the presence of the foremen, - men who gave technical direction to the tasks of the specialised labourers and who gave unity to the production process. Thus, foremen existed in almost all of the main sections of the *arsenal*, and each commanded a sizeable number of labourers. The foreman shipwright alone reportedly was in charge of over a thousand carpenters and sawyers (10).

Again, whereas the *arsenal* was a unit of production which clearly belonged to a new stage in the evolution of capitalism, the *guild system* of the Middle Ages continued to function, be it apparently in a modified way. There were three guilds for the shipbuilding crafts, i.e. the guild of the ship carpenters and those of the caulkers and the sawyers. These guilds as had been the case during the Middle Ages, still served to protect the profession of their members. They were associations of craftsmen for the furtherance of their own interests, collecting money for instance for the marriage of daughters and for the burial of deceased craftsmen. A part of the burden of social insurance for the caulkers and carpenters, however, was borne by their employer, for the state-guided *arsenal* provided a pension for its employees in old age. This financial dependence of the craft workers and their guilds, as is to be expected, affected their autonomy. According to Lane, the guilds of the Venetian *arsenal* by the 16th century had partly turned into branches of administration. They now had become organs through which the Venetian government enforced its will upon the craftsmen (11).

Clearly, the production relations of the *arsenal* no longer conformed to those which had prevailed when towns and cities were initially created. Whereas urban centres in the late Middle Ages had been constituted as centers where craftsmen and other small producers celebrated their independence from the rural aristocracy, - the *arsenal* expressed a new approach to the organisation of production, restricting the artisans' liberty. Towards the aim of the defence of Venetian might, the production of galleys was streamlined, through a structure of discipline and cooperation of large groups of specialised workers now toiling in one and the same complex. This capitalist result, however, was not achieved by the artisans themselves or by persons mediating between production and sale, but wholly by the city-state's government. And since, as the account of Lane indicates, the *arsenal* in the 16th century had superseded in importance all other Venetian construction-sites of galleys, - there can be little doubt that in this case it was the state which at the given point in time steered the historical transformation in production relations.

4. The Arsenal and Marx's Analysis of the Manufacturing Stage

Let's now briefly analyse the experience of the Venetian Arsenal with reference to Marx's conceptualisation of the *manufacturing period*. In *Capital I*, Marx gave a beautiful exposition of the manufacturing stage as having been a transitional stage leading toward the emergence of capitalism proper. The given stage in his view was an intermediate one between the historical period of the master artisans, working independently in their own workshops, and that of the factory system, where large numbers of waged workers were brought under the sway of industrial machines. According to Marx, in the period preceding the latter, the *collective worker* already emerged, as large numbers of labourers were gathered together to toil in one and the same space. Amongst them, a division of labour existed which assigned skilled artisans to specialised detail tasks. To a certain extent also, a division between unskilled and skilled labouring tasks emerged. According to Marx's assessment, the manufacturing period lasted from the middle of the 16th until the later part of the 18th century (12).

As part of his analysis Marx mentioned several concrete examples, including that of the construction of carriages and that of the production of watches, but he nowhere discussed the experience of the *arsenals*. Yet from the facts cited above on the division of labour in the Venetian arsenal, the great relevance of Marx's views is immediately evident. Marx described two processes by which the manufacturing division of labour emerged. One is through gathering, under one roof, artisans belonging to a variety of disciplines, who earlier had carried on their trade in separate workshops. The other one is the very *reverse* of this process. Here, the capitalist simultaneously started employing in one workshop a whole series of artisans who already shared the same skills, and who now were induced to divide their jobs into constitutive parts. Although handicraft skill, in Marx's view, continued to serve as the very foundation of the process of production, through the given processes of combination and recombination both the division of labour was consciously developed, and the 'productivity' of labour was enhanced (13).

The example of the Venetian *arsenal* illustrates indeed that the two processes of the labour process' restructuring took place simultaneously in the manufacturing period. Here, as stated, a number of artisans with distinct disciplines were at work in one and the same production complex, with tasks varying from the building of the warship's hull and the making of the ship's sails, to the forging of swords and lances. On the other hand, tasks relating to the framing of the wooden parts of the ship and its equipments were subdivided into those concerning the manufacturing of the hull, the cabin and the deck furnishings on the one hand, and those concerning the making of masts and oars on the other. The list of employees cited by Lane, of those who worked in the *arsenal* in the year 1560, indicates that the system of artisanship and apprenticeship continued to exist under the manufacturing division of labour functioning here, and that different categories of artisan workers had been assigned a limited number of unskilled labourers as assistants (14). The labour organisation in the Venetian *arsenal* thus demonstrates in a striking manner that the collective labourer came into existence long before the Industrial Revolution occurred.

Yet the *arsenal's* experience also brings out that the manufacturing period started earlier than Marx suggested in *Capital I*, and that *state-guided* production significantly contributed to the historical transition from the artisan period to the manufacturing phase of capitalism. For whereas Marx, as stated, thought that the latter phase only started by the middle of the 16th century, the Venetian *arsenal* by then had reaped more than two and a half centuries of experience. Moreover, whereas Marx's analysis gave no reason to presume that the state actively promoted the growth of a detailed division of labour, the example of the production of warships under the Venetian *arsenal*, which appears to have been the very largest complex with collective labourers in the 16th century city-state, is likely to have exerted an influence on the mode of operation of private shipbuilders and other manufacturers. In any case, whereas Marx ignored the role of *arsenals* and that of the state in the transition from the artisan to the manufacturing period, their role does need to be posed by critical economic theory.

5. England and France in the 16th and 17th Centuries: Arms' Production Partly Subcontracted by the State

We now need to note a form of organisation of production which somewhere lies in between that of the Venetian *arsenal*, and that which characterised the private wharfs under corporate ownership, which organisation of production was to predominate in the monopoly phase of capitalism. This intermediate pattern of production relations reportedly emerged in England and in France, two Northern European states which in the 16th and 17th centuries both devoted large resources towards the construction of a war fleet, as a part of their striving to gain hegemony in Europe and in the world. Here, in Northern Europe, the main warship became the sailing galleon. Contrary to the oared fighting galley of the Mediterranean, the galleon was distinguished by its broadside along which a battery of heavy guns was placed at a commanding height (15). Side-by-side with the development of a distinct type of warship, the rulers of England and other Northern European states also devised a distinct pattern of production relations, in which the state *subcontracted* the responsibility for construction of warships to master artisans.

Under this pattern, which is briefly described by the German author Werner Sombart, the state no longer sought to directly control the production process through appointed officials, but instead offered contracts in which a fixed price for the whole construction work was agreed to with private individuals. As in the *arsenal*, the division of labour was a manufacturing division of labour. Artisans with a variety of skills – carpenters, smiths, painters, coopers, etc. – all toiled as collective labourers within the same production compound. As in Venezia, there were foremen who gave technical guidance and ensured the unity of the production process. However, contrary to the situation in the arsenal of the Italian city-state, the chief shipwright under the contract system that emerged in England in the 16th century was not offered a labour contract, but a *product contract*, which stipulated what price the sovereign would pay for the sailing galleon upon completion of its construction (16).

Further, both in England and in France, the state continued to supply the royal shipwright contracted to do the job with the necessary wood and other raw materials so as to implement the construction project. Hence, the state dominated the production process

in the wharf not by controlling its management, but by furnishing the commodities needed to launch the manufacturing process, and by buying the wharf's end product. Moreover, the state not only performed supply tasks in relation to the wharfs where warships were built, but according to Sombart also did so in relation to wharfs where *commercial* ships were built (17). This latter is reminiscent of the intermediary role played by the *arsenal* of Venice with regard to wood. It indicates that states, through the rise of capitalism in Europe, have repeatedly mediated the production of commodities, - not only by providing a guaranteed demand, as they did in the case of warships, but also by ensuring, in the case of civilian vessels, that those raw materials would be supplied that were most crucial to the production process.

Once again, then, a partial adjustment in our view of history is called for. According to a view commonly held by critical economic theoreticians, commercial traders mediated the transition from the individual and scattered artisan-production of commodities existing by the later Middle Ages to the manufacturing stage. They did so presumably by undertaking to supply the artisan producers with raw materials, and by combining this role with that of buyer of the artisans' end product. This appropriation of roles is supposed to have preceded and paved the way for the centralisation of production under the traders' command. From the account provided by economic historians, it appears that a different sequence, process of transformation, has marked the production of arms, and more particularly of warships. For while various patterns have existed side-by-side even in the military sector, the pattern laid bare by Sombart is that of a transition from the state-guided production of warships of the later Middle Ages, to the production on *contract basis* which reportedly existed in England and France during the 16th and 17th centuries.

6. England's Rise to Primacy And the State-Guided Drive to Accumulate

We now should look briefly at the significance which the construction of warships held for the incipient social accumulation process, i.e. for capital accumulation on a national scale. Once again, we may rely on data regarding England, cited by Sombart. First, just like Venice in the 16th century, the English Republic in this same century registered a remarkable increase in production of warships. Sombart's book contains a comparison between the tonnage of warships built in the twenty-two year period from 1559 to 1580, and the tonnage of warships built in the succeeding twenty-two years, i.e. between 1581 and 1602. Whereas during the first mentioned period some 31 thousand tons of warships were built, during the second mentioned period the amount was 103 thousand tons (18). The threefold increase in the quantity of production in tonnage terms was achieved in such a short period, as to invite comment indeed. Clearly, the quantitative expansion in the production of warships in the given period was remarkably large. It indicates that such construction formed a key part of the incipient accumulation process in England at the time.

Indeed, warships at the time appear to have led the process of enlargement in the size of all ships constructed. Here, Sombart offers data on the size of warships that was common in the 17th century. According to him, a weight of *one thousand* tons became the rule for warships during this century, and it was well beyond the average tonnage of

commercial ships in the given age. Thus, in 1688, at the time of England's war with France, the English war fleet comprised 41 ships with over 1 thousand tons of weight, the heaviest weighing 1739 tons. Sombart adds that the crew of these ships was equally large, varying from 400 to 800 persons, and that each contained a large number of artillery pieces, i.e. between 70 and 100. This emphasis on the construction of mighty ships, involving huge material resources and labour power, could not but exert a major impact on the vision of English capitalists. As Sombart argues, 'the important thing is that the navy, through the building of such large ships, revolutionised all conventional ideas as to what size of ships could be built; it created examples!' (19).

Moreover, the state took an active interest in promoting the building, also, of specially large commercial ships. This, according to Sombart, it did by offering subsidies to wharfs which undertook to construct ships with a size that was challengingly huge. A part of the reasoning behind the policy was that large commercial ships, in time of need, could be recruited to serve military ends. As during the age of the Mediterranean galleys, the difference between military and civilian-type ships was still relatively small. The policy of offering subsidies (*premier*), thus, became a widespread practice among European rulers, and it reportedly much affected private capitalist initiative. For, as Sombart argues, during the period of the rise of capitalism, individual entrepreneurs frequently displayed a tendency to stick to old ways and eschew change. In this context, the state-policy of providing subsidies to wharfs that undertook to build giant ships helped private entrepreneurs to break with pre-capitalist modes of thinking, and promoted the drive to accumulate (20).

The evidence cited by Sombart on sizes of warships in the 16th/17th century and on governmental subsidies for construction of giant ships, leads once again to the conclusion that the process of capitalist accumulation has never been a self-contained, market process, but has always encompassed an active role for the state. In the previous chapter we have seen that the state, in Holland and in England, steered the process of founding national financial markets where capitalists could lend their surplus capital against an interest. Here, in considering the evidence on military and civilian shipbuilding, we reach the conclusion that, parallel to its intervention in the banking and financial sphere, the state from early onwards also intervened in the production sphere to promote an expansion in the *scale* of capitalist production. And although its intervention directly covered only a few selected fields of production, the state's policy on shipbuilding undoubtedly did affect a variety of interrelated economic activities, including the exploitation of the raw material wood, and the production of iron, used to manufacture the ships' artillery.

7. The State and the Growth of Department I - The Department Generating Means of Production (MP)

To measure the extent to which the state has promoted the growth of capitalist production relations in European history, we further need to consider the state's impact on the formation of identifiable Production Departments. I'll first take the case of the Department for production of the Means of Production (**MP**), consisting both in mining industries created for the extraction of raw materials from the soil; in processing industries, turning out processed raw materials which can directly be employed towards

the production of arms and civilian commodities; and in industries turning out industrial components and machinery. Here I will focus specifically on the extraction and transformation of metals, which historically have functioned as key materials in the manufacturing of artillery and other arms. Economic historians have collected substantial evidence to prove that state-guided military production from the period of the Venetian city-state onwards and all through to the British Industrial Revolution has stimulated the mining and processing of metal and metal products: of copper which was the key raw material in bronze weapons first, and of iron subsequently.

First – as to the production of copper: as early as in the 15th century, the proportion of copper in bronze weapons was similarly large as the proportional share of copper common in bronze products today. It was over nine-tenth of the metal content of bronze (21). Copper reportedly was the very first metal for which a large social demand was created. In the 16th century, when copper mining was largely concentrated in Northern European states, it formed the principal source of wealth of German capital groups, such as the powerful Fugger Hause. According to Sombart's data, the total investments made by the Fugger House alone in copper production in the year 1546 were larger than any other capital investment in the annals of 16th century commerce (22). This fact should be combined with the fact that the copper sales of the Fugger House and of other German houses were largely oriented towards *public* consumers rather than towards incipient private entrepreneurs. For the purchasers of mined copper were primarily arms' producing city-states, such as Venice. According to Sombart, the latter Italian city through a whole period of history functioned as *the* centre where the international price of copper was determined (23).

Again – data on the history of Great Britain collected by economic historians testify to the fact that state-purchases of iron for weaponry had a formative influence on the growth of the country's modern iron industry. In the 16th and 17th century, Sussex reportedly was the chief centre of the English iron industry, and its raw material output to a large extent was employed towards the manufacturing of cannons and bullets (24). As to the situation immediately after the Industrial Revolution, when Britain was engaged in war with revolutionary France, - according to McNeil 'both the absolute volume of production and the mix of products' that at the time came from British factories and forges were 'profoundly affected by government expenditure for war purposes'. Government demand in particular 'created a precocious iron industry', and crucially affected the changes in production technique in the iron forges of the time (25). Here again, with regard to the mining and processing of iron ore, we note that the state's demand for new capitalist commodities, allocated towards the manufacturing of weaponry, apparently exerted a formative influence on the industry.

The examples of copper and iron, even if referred to here only briefly, illustrate that the state's role in the period of the rise of capitalism must definitely be taken into account. Surely, the state was not the only purchaser of these metals, and not all production of arms and ammunition was concentrated in state-*arsenals*. Powerful private arms' manufacturers also existed during the period of the rise of capitalism, such as the gun foundries in Liege, Belgium (26). Furthermore, the data regarding the formation of national and international demand in copper and iron ore cited by Sombart, McNeil and other economic historians seem too incomplete to warrant final conclusions. Still, there is

no doubt that copper and iron were crucial raw materials, and that the mines and the processing industries for these metals were key commodity sectors contributing to the gradual formation of the Department for production of The Means of Production. Hence, to the extent that the state became the chief or one of the chief purchasers of these raw materials, it did contribute to the historical transition towards capitalism, and helped in constructing the system's Production Department I (MP).

8. The State and the Growth of Department II – The Department Generating Means of Consumption (MC)

I lastly wish to briefly consider the impact of the army purchases by the state during the period of the rise of capitalism on the formation of Department II, the Department for production of the Means of Consumption (MC). First it should be noted that this period in European history was marked by the regularisation of state-armies, i.e. the creation of standing armies. The given transition was reportedly made in the Italian city-states, where militias recruited from among professional artisans initially were the main form of military organisation. These were ultimately superseded by standing armies, partly recruited from among the unemployed. The period of the rise of capitalism, further, was also marked by a tremendous expansion in army size. Both the regularisation of armies and the quantitative growth in the number of persons recruited to serve as soldiers, according to economic historians such as McNeil and Sombart, had a direct impact on the growth of capitalist relations, as massive purchases of daily necessities and other consumer goods had to be made in order to feed and cloth the standing armies of the warring European states.

William McNeil, for instance, in writing about 18th century purchases by the British navy, insisted that these stimulated the growth of commercial agriculture. 'The victuallers who provided meat, beer and biscuit for the royal navy, had to feed a population of anywhere from 10 thousand to 60 thousand men, by buying provisions inland and delivering them to the naval storehouses on the coast.' (27) These purchases then promoted a reorientation in peasant production, from production for sustenance and local use, towards production for the capitalist state and a national market. On the other hand, as McNeil equally notes, through the imposition of taxes on rural regions where production relations were still partly pre-capitalist, the incorporation of agriculture in the new mode of production was promoted too. And since bread, beer, biscuits and other daily necessities which the navy and infantry regularly needed to buy are very key means of consumption (MC), it may safely be assumed that the massive purchases for Europe's expanding armies were a basic factor stimulating the formation of Department II, the Department for production of the means of consumption.

Similarly large claims as for food items have been put forward regarding the impact of army purchases of uniforms. Thus, Sombart points at the fact that the regular purchases of large quantities of uniforms to clothe European state armies led to standardisation of production, i.e. to production of identical commodities on an increasingly large scale. Previous to capitalism's manufacturing period, when artisan production predominated, standardised production of commodities was little developed. Europe's standing armies, according to Sombart, in placing orders for massive quantities of uniforms, did critically promote the standardisation of commodity production in the textile sector, at a time when mass production of standard commodities was relatively

uncommon (27). Here again, with regard to army purchases of cloth, we can speak of an impact that the state exerted on the formation of Department II, for alongside the agricultural sector, the textile and clothing sector was a second key commodity sector contributing to the formation of the Department for production of the Means of Consumption (MC), - i.e. Marx's second fundamental production department.

Once again, we note that the state in the period of capitalism's rise in Europe, through its military purchases actively intervened to direct the transition in the social relations of production. Surely, with regard to the state's impact on the formation and further expansion of Department II, there is no radical break between the various phases of historical capitalism, for army orders of standardised daily necessities are as characteristic for the monopoly phase of the system, as they were for the system's 'manufacturing period'. Nevertheless, the evidence on state-purchases of food and clothing reinforces the conclusion drawn in the previous section on the historic state's relationship with Department I. The capitalist system during the centuries of the rise of capitalism should not be conceptualised as an emerging model consisting of two fundamental Departments, but instead as a system that consisted in two incipient Production Departments, the growth of which Departments was actively stimulated by intervention of the state. Reality most closely conformed with a system of three 'pillars', as described in the first part of my chapter on Marx's scheme of simple reproduction (29).

9. Conclusion:

The State and the Historical Transition towards Capitalism

In this chapter I have sought to briefly sketch the role which the state has played in the historical transition towards capitalist relations in Europe. My first conclusion relates to the dating and the analysis of the manufacturing period, when the collective labourer was created by bringing large numbers of labourers together to work in the same space, - ahead of the creation of the factory system. Whereas Marx had presumed that the beginning of the manufacturing period laid in the 16th century, and that the transition was directed by merchants mediating between artisan producers and the market, evidence gathered by historians on the history of arms' production in *arsenals* indicates that significantly large groups of carpenters and caulkers, as well as other master-artisans and assistants, had been brought together well before the 16th century, and that by the latter century the organisation of labour in state-managed military production units was well developed. Clearly, the conclusion seems justified that as production organiser, the state under rising capitalism did set an example for private entrepreneurs, and contributed significantly towards changes in production relations.

This conclusion regarding the state's position as motive force for historical change can be broadened, by further taking into account the state's purchasing policies during the centuries leading up to the Industrial Revolution. These policies partly overlap with the state's role as production organiser, for as owner and manager of the arsenal the state needed to access key raw materials, such as wood for the construction of its warships, and copper or iron for the manufacturing of cannons and other weaponry. However, the size of state's military purchases was also determined by its requirements to maintain a large standing army, as became the rule in Europe from the time of the

flourishing of Italian city states onwards. Both in its capacity as production organiser, and as purchaser of food, uniforms and other army supplies, the state acted as spender of revenue, distributing monetary resources which it gathered as revenue-collector. Although further historical research seems needed, before a full assessment of the state's historical role as purchaser can be offered, from the evidence gathered so far it appears that here too the state promoted the transition in production relations towards capitalism.

Lets', lastly, briefly place the data presented in this chapter in the context of the discussion on Marx's scheme on social reproduction. In my chapter on simple reproduction, I have suggested two possible models for the analysis of military production under capitalism. In the one model, the military sector has an autonomous status. It functions as non-reciprocal sector between the two fundamental Departments of Production on the one hand, and the revenue holding state on the other, providing the state with scope to manipulate it, the military sector, for the purpose of business cycle regulation. In the other model, a model which has preceded the former model, the state instead is owner of military production facilities, and acts as organiser-manager of the production taking place in the arsenal. Under this model, the state's economic relationships with Department I and II are not mediated by the military sector. Instead, the public consumer obtains the raw materials it requires for the *arsenal* directly from enterprises under Department I, just as it directly purchases food and clothing from companies which are located in Department II.

The evidence presented in this chapter shows that for our discussion on the period of transition, i.e. capitalism's manufacturing period, only the last mentioned model is of relevance. Yet since each model presumes that the capitalist mode of production prevails, we can only speak of a gradual approximation of production conditions in Britain and other European countries towards the model with three 'actors', for it is only during the 19th century, when business cycles became a regular feature of economic life, that capitalism got to be structured along the lines of 'Production Departments'. In the centuries that preceded the Industrial Revolution and the period of *laissez faire* capitalism, these Departments were only in *status nascendi* (in formation) indeed. Hence, in analysing the impact of the state's purchases of copper and iron, of bread and uniforms, on the production processes in companies manufacturing these commodities, it is indeed correct to speak of the state's influence on the formation of Departments. This only serves to confirm that the state has exerted an enormously large impact on European societies during the period of the rise of capitalism.

References:

- (1) Werner Sombart, *Krieg und Kapitalismus* (in German: War and Capitalism –Verlag von Dunker & Humboldt, Muenchen and Leipzig, Germany, 1913, Chapter One ;
- (2) Frederic Chapin Lane, *Venetian Ships and Shipbuilders of the Renaissance* - Johns Hopkins Press, Baltimore, USA, 1934;
- (3) on this point section 7 of this Chapter; for the example of warship- construction in the decentralised *Admiraliteiten*, the production sites for warships of the Netherlands in the two centuries preceding the French Revolution, see Jaap R.Bruijn, *The Dutch Navy of the Seventeenth and Eighteenth Centuries* (University of South Carolina Press, 1993);
- (4) Frederic Chapin Lane (1934), op.cit.;

- (5) *ibid*, p.152;
- (6) *ibid*, p.146-175;
- (7) *ibid*, p.150;
- (8) *ibid*, Chapter XII, The Timber Supplies, p.217;
- (9) *ibid*, p.143;
- (10) *ibid*, p.88;
- (11) *ibid*, p.72, The Craft Guilds;
- (12) Karl Marx, *Capital. A Critique of Political Economy. Volume I* (Progress Publishers, Moscow, USSR, 1977), Chapter XIV, The Division of Labour and Manufacture, p.318;
- (13) Karl Marx (1977), *op.cit.*; the term productivity here is employed by Marx in its capitalist sense, as referring to the quantity of products generated in course of a certain measure of time;
- (14) Frederic Chapin Lane (1934), *op.cit.*, p.161-163;
- (15) Peter Padfield, *Guns at Sea* (Hugh Evelyn, London, United Kingdom, 1973), Chapter Nine, 'Galleys versus Sailing Ships', p.41;
- (16) Werner Sombart (1913), *op.cit.*, p.195;
- (17) *ibid*, p.197;
- (18) *ibid*, p.190;
- (19) *ibid*, p.186;
- (20) *ibid*, p.187;
- (21) *ibid*, p.103;
- (22) *ibid*, p.105;
- (23) *ibid*;
- (24) William McNeil, *The Pursuit of Power. Technology, Armed Force and Society Since A.D.1000* (Basil Blackwell, Oxford, UK, 1982), p.112/113;
- (25) William McNeil (1982, *op.cit.*, p. 211; compare Werner Sombart (1913), *op.cit.*, p.108-109;
- (26) *ibid.*, p.113; as McNeil states, the Liege gun makers could force the mightiest rulers in Europe to pay the prices which they demanded for their military commodities: 'Only when the artisans and capitalists of Liege and other arms centers did not have to part with their goods at prices decreed by Spanish or any other political authority, could rulers get what they wanted in the quantities to which they had become accustomed';
- (27) *ibid*, p.181;
- (28) see Werner Sombart (1913), *op.cit.*; further comments on the standardisation of production;
- (29) Chapter Ten above;

