THE POLITICAL ECONOMY OF GERMANY, 1815–1914

Martin Kitchen

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To Dick, Katharine and Emily

PREFACE

Writing an introduction to the Political Economy of Germany in the nineteenth century has proved to be both challenging and frustrating. The opportunity to organise and discuss in greater detail some of the major themes of my earlier work has proved immensely rewarding, but in the process of attempting to cover such a wide field I have become increasingly aware of the problems of writing such a book. Apart from my own shortcomings there is the lack of much basic empirical research on some of the key issues of the economic development of Germany in this period, an obsession by many historians with economic theories which border on the theological, and a serious lack of coherent and consistent statistical data, particularly for the earlier part of the century. In a book of this size there are perhaps too many opinions that are inadequately substantiated owing to lack of space or inadequate evidence, a certain simplification of complex issues, and an underemphasis of regional disparities. Hopefully, the more polemical passages will be seen as hypotheses designed to stimulate debate rather than over-confident and dogmatic statements of fact, and the book will be of use to a wide audience of all those who are interested in the debate on the question of why German society evolved in its own particular and unique manner.

The theme of this book is the interaction between economic development and social structure. Relationships between economic, technological, social and political developments are examined in an attempt to delineate the history of economic social formations seen as a totality. My main concern in writing this book was to try to discover why German society developed in such a distinct manner and why economic modernisation did not lead to social modernisation. The peculiarities of German industrial capitalism cannot be examined simply in terms of business history, the history of technology, agricultural history or the statistical sophistication of the 'new economic history'. This is partly because to so many economic historians 'capitalism' is a slightly embarrassing word which smacks of a political orientation which is not their own, and partly because capitalism, like all economic activity, is also a social formation. Without an examination of the social dimension of economic activity, economic history all too easily becomes bloodless and abstract, or is one-sided and thus distorted. Social activity is not simply

a direct result of the development of the material forces of production, for economic activity is in turn decisively affected by the conscious activity of men and by the social formations within which it develops. I have tried where possible to discuss this interaction of the social and the economic in terms of a reciprocal relationship so that political decisions can be seen as having been determined by economic developments and yet having profound economic consequences.

The process of industrialisation is immensely complex and its consequences are felt throughout a society. In a book of this length I have only been able to discuss some of the factors which made an industrial revolution possible, and to suggest some of the effects of exceptional economic growth in a society that refused to adapt itself to lessen the resulting social and political conflicts. Such an approach will not please many economic historians, but hopefully it will offer suggestions to students of German history who wish to study the relationship between economic, social and political change.

Many shortcomings in the original draft have been at least partially overcome thanks to the incisive and constructive criticism of an economic historian whose desire for anonymity is due less to his becoming modesty than to a profound methodological disagreement over the foundations and principles on which this book is based. To him I owe a great debt of gratitude for his encouragement, scholarly detachment and enduring friendship. I would equally like to thank Peter Weber, whose remarkable knowledge of the period and exceptional bibliographical expertise has saved me from many errors. I should also like to express my thanks to Professor Fritz Fischer, whose work has been a constant inspiration and who in private conversation has provided more guidance and help than he would be willing to admit.

To Sheila Roberts who came to my aid at a critical time in the writing of this book I am deeply grateful. Pearl Sirkia, Elsie Trott and Phyllis Hawkins typed a difficult manuscript with great skill and were unfailingly co-operative and cheerful.

1 GERMANY IN 1815

Abolition of Serfdom

In 1815 Germany was an agricultural society. The population of the German states, excluding that part of Austria which belonged to the German Confederation, amounted to approximately 23 million, of whom 10.5 million lived in Prussia. Of this total population three-quarters lived in rural areas. Apart from the Rhineland provinces and south-western Germany, where much of the land was owned by small farmers, most of the agricultural land was the property of the aristocracy, a class which included a large number of impoverished petty aristocrats, whose estates were still organised on traditional semi-feudal lines. The Napoleonic wars resulted in a serious reduction of the number of farm animals. The crop failure of 1816 caused the most serious famine for almost half a century, a situation which was made even more acute by the outbreak of an epidemic which decimated the seriously inadequate stock of cattle. Widespread suffering and misery among the common people were coupled with a political reaction which threatened to destroy the all too modest advances which had been made since 1806 towards the creation of a less autocratic and hidebound society. Yet although Germany in 1815 seemed poor, backward and reactionary, significant changes had been made, particularly after the crushing defeat of Prussia by the French in 1806, which were to have a profound effect in the years to come by providing the basis for modernisation and economic growth. The most important of these measures was the Prussian edict of 14 September 1811 which revised the relationship between landlord and peasant and which called for the liberation of the serfs.

The feudal order on the land was the corner-stone of Prussian society in the eighteenth century. For this reason it was fiercely defended by those who profited from the system, who feared the consequences of dramatic change or who argued that the preservation of traditional society was the only alternative to a bloody revolution on the French model. Conversely, no aspect of Prussian life was more fiercely attacked by the liberal bourgeoisie, who used the arguments of the British classical economists about the harmful effects of privilege and traditional rights and obligations on the economic life of the nation, which they combined with older arguments from the physiocrats on the importance of agriculture to point out the evil social and economic consequences of

serfdom. Thus on both sides there was agreement that the abolition of serfdom would have far-reaching consequences. The aristocracy feared, and the liberal bourgeoisie hoped, that agriculture would be based on free wage labour and the introduction of the capitalist mode of production to the rural economy.

Whereas in France the feudal system had been destroyed in the revolutionary edicts of August 1789, August 1792 and July 1793 and confirmed in the Code Napoleon of 1804, the system remained virtually intact in Prussia. Peasants lived in a condition of hereditary serfdom, the forms of that serfdom differing in various areas. They were unable to move, or to marry, without the permission of the lord to whose estates or person they were bound. Their children were obliged to work on those estates. Even those peasants who owned land were forced to provide labour service on the aristocratic (*Junker*) estates, and such peasants were also bound to the land, for their ownership depended on the performance of feudal duties. Harsh punishments were meted out to those who failed to meet their obligations, frequently involving brutal floggings, from which women were not excluded. The hunting rights of the aristocracy were a particular hardship which excited the indignation of the reformers.

There were many compelling arguments in favour of the liberation of the serfs. Reformers like Stein felt that free wage labour was far more efficient and productive than forced labour service. The great architects of the new Prussian army, Scharnhorst and Gneisenau, were convinced that only free men would be prepared to fight and to die for the liberation of their country. Humanitarians were outraged at the primitive conditions on the land which were so harsh a contrast to their ideal of the basic human right to a dignified life and to opportunities for self-betterment. Others argued that without a 'revolution from above', involving measured and cautious steps towards economic, social and political reform, Prussia could well fall prey to a social revolution 'from below'.

The French Revolution thus provided an important external stimulus to reforms which were long overdue. Some of the peasants on the royal estates in Prussia were freed from feudal obligations, but as these obligations were commuted, the King made a handsome profit from this enlightened reform. The suggestion that a similar reform could be carried out on the estates of the nobility was greeted with the outraged indignation of the majority of Junkers, who were unwilling to abandon their old way of life whatever the immediate economic advantages of such a move. The defeat of Prussia at the twin battles of Jena and Auerstädt

in 1806 was so crushing that even many of the most extreme conservatives realised that drastic changes were necessary if Prussia were ever to regain her status as an independent state. The abolition of serfdom in the Grand Duchy of Warsaw and in Westphalia gave the Prussian aristocracy further cause for alarm, for they feared that either there would be a mass emigration to these freer areas by peasants who found the oppressive Prussian régime intolerable, or that there might be a growing demand for reform inspired by events in the neighbouring states.

The first major step towards the liberation of the Prussian serfs was taken with the edict of 9 October 1807, in which the King announced that 'from Saint Martin's day 1810 all states of subjection (*Guts- und Untertänigkeit*) will cease in all our states. From Saint Martin's day 1810 there will only be free men.' In return for the loss of absolute control over the peasantry the Prussian aristocracy was granted free disposition over the land. Thus the abolition of serfdom also involved the abolition of the *Bauernschutz*, the laws which had given the peasant security of tenure over his own holdings, which protected him against unfair competition, and which gave him a relatively secure position in an increasingly hostile economic environment. Feudal land ownership was thus to be replaced by completely free ownership, and the aristocracy would be able to buy and sell land without interference from the state authorities. The elaborate eighteenth-century system of land tenure, which was designed to preserve the social order, was abolished, and capitalist property relationships were to take the place of feudalism. The free peasants no longer needed the consent of the landlord before they could marry, their children were no longer required to perform compulsory service for the landlord. They were free to determine their heirs. Perhaps most important of all, they could change their domicile without prior permission from the landlord. Yet even these freedoms were not absolute; the landlord had police rights over his estates and no one could leave without a certificate from him that he was not suspected of any misdemeanour, and labour relations between lord and peasant were still governed by the 'regulations for servants' (*Gesindeordnung*) which restricted the freedom of the labour market.

The implementation of the October edict proved to be exceedingly difficult, for practices were widely different in the various Prussian provinces and the whole question of feudal obligations and duties was thus immensely complex. The central question was to decide which feudal duties were to be abolished, which were to remain, and whether

or not compensation should be provided for the loss of customary privileges. On 14 September 1811 a further edict announced that peasants who had hereditary tenure were obliged to give one-third of their land to the lord as compensation for the abolition of feudal obligations. Those who had no hereditary rights had to give up half their land. Hardenberg's edict was opposed by the aristocracy, who felt that the compensation was inadequate, or who opposed the abolition of feudal obligations altogether. The landlords thus set about sabotaging the edict by raising endless objections and postponing any effective action as long as possible. A further edict in 1816 excluded all small peasant holdings from the reform as well as any land that was not entered in the provincial tax rolls, or which had become peasant property after the land reform of Frederick the Great at the time of the Seven Years War. As a result of these changes only a minority of the peasantry were affected by the reform. The majority continued in a state of semi-feudal dependence and were at the mercy of the aristocracy. These feudal obligations were not abolished until after the revolution of 1848, and the process was not finally completed until 1865. By this time very few peasants were still in a state of dependence as a result of their land holdings. Without the protection of the *Bauernschutz* their land had mostly been absorbed into the large estates of the nobility and they had become landless labourers. The obligations which remained after 1848 were of a minor nature, such as the duty to pluck geese for bedding on the occasion of a wedding or baptism in the landlord's family.

The liberation of the serfs, although incomplete and one-sided, was nevertheless a major step towards the economic and social modernisation of Prussia. The feudal mode of production now belonged to the past and it remained to be seen how the new class of free and equal peasants would survive in a harshly competitive economic system without the support and protection which had been given them in the past. Those liberal reformers, who had hoped to create a class of fiercely independent yeomen farmers from a servile peasantry, were soon to be disappointed. The free peasant was unable to compete in a free market economy. His land was seriously reduced by the provisions of the edicts of 1811 and 1816, and his remaining holdings were often too small to support a family adequately. He had no capital, and no credit was available to him without resorting to usurers, who usually proved to be his downfall. By contrast, the aristocracy had their own credit institutions which provided them with much of the capital required for expansion and for investment in modern techniques. Most

of the Prussian Junkers were quick to adapt their way of thinking to the new situation, and as often as not objections to the proposed reforms, particularly in the later stages, were not over matters of principle, but rather in order to extract the highest possible benefit from any changes.

The result of these reforms was an increase in the size of aristocratic holdings and a diminution of the amount of land owned by the peasantry. The Junkers gained land through compensation for the abolition of feudal obligations and duties, they speculated in land on the free market, and they bought up the holdings of peasants ruined in the agricultural crisis of the 1820s. The precise amount of land lost by the peasantry cannot be measured with absolute accuracy, but most historians agree that it was about 2.5 million acres, or about 45 per cent of all peasant land. This increase in the size of aristocratic estates would have been even greater were it not for the fact that the nobility made a brisk trade of selling land to the wealthy bourgeoisie, who were now no longer restricted from purchasing the lands of the aristocracy, and once the rising bourgeoisie began to ape the behaviour of the aristocracy, the position of the latter was further strengthened. The large estates of the Junkers were the product of feudalism, but they grew larger as a result of the reforms of Stein and Hardenberg. Unlike France, they were not divided up among the peasantry, and unlike England, they were not leased out to enterprising farmers. The large feudal estates became large capitalist concerns. Such was the unique 'Prussian way' to the modernisation of agriculture which was to have such a tremendous impact on the future economic, social and political development of Prussia and of Germany.

The peasants were now mostly free wage-earners. They had either commuted their obligation to labour service by handing over part of their land, or, in the case of the smaller peasants, by losing their land altogether they were no longer obliged to perform the duties which ownership of that land entailed. Yet, as Max Weber has pointed out, the distinction between serfs (*Fröner*) and day-labourers (*Insten*) was not so very great. Day-labourers were paid in large part by grants of land, and the serfs had been given money for service. Without the protection of the *Bauernschutz*, and with the relationship between lord and master now based on a mainly economic tie, the position of the peasant might have been freer, but it was also more uncertain and insecure. With the agricultural depression after the wars of liberation there begins a movement of population away from the land to the urban areas, which was to become even more pronounced in the railway age. Until the time of German unification in 1871 this loss of rural population was still

relative, and was more than offset by the increase in population, but it was important in that the displaced peasants and artisans provided the manpower for the new industrial enterprises. Thus the liberation of the peasants from the bonds of feudalism was an important precondition for the industrialisation of Germany by creating the necessary mobility of labour.

These reforms affected Prussia east of the Elbe and they had such a profound influence because of the unique position of the land-owning aristocracy in Prussia, and later of Prussia within a united Germany. In other parts of Germany the situation was very different. In the Rhineland and the Kingdom of Westphalia feudal obligations were abolished, usually without compensation, by the French before the reforms in Prussia. In Westphalia the old system was restored after the defeat of the French in 1813 with the somewhat perverse argument that it is better to restore the old, even if it is bad, and then reform it yourself. In fact it needed the revolutionary upheavals of 1830 before the aristocracy would agree to the commutation of feudal obligations. In Schleswig and Holstein serfdom was abolished in 1804, and the big landowners were quick to see the advantages of wage labour and leasehold farming. Bavaria abolished the remnants of serfdom and ground rents in 1808, but the liberation of the peasants was made dependent on the agreement of both parties. The resulting confusion was not settled until 1848, when the old system was finally abolished, as it was in this revolutionary year in Austria and in Saxony. Serfdom had been abolished in Baden as early as 1783, largely because of the influence of physiocratic teaching, but some remnants of the feudal system remained to be swept away in 1848. In north-west Germany, Thuringia and Bavaria, serfdom had played a minor role and the effects of these reforms were less dramatic than in Prussia east of the Elbe.

Although serfdom had been virtually abolished by 1815 throughout Germany and rural labour was almost free, elements of the old system still remained. Thus the landed aristocracy retained jurisdiction over the peasantry, a right which seriously restricted the freedom of the peasants and which remained in force until the revolutions of 1848, in some instances to be reimposed in the 1850s. Freedom of movement was also constrained by governments who feared that their states would be overrun by undesirable elements from other parts of Germany and who imposed stringent immigration regulations. Thus the reform was still incomplete. Conditions in various parts of Germany differed widely and much remained to be done before agriculture was free from the last remnants of a system which had hampered its growth. The

question of the compensation to be given for the loss of feudal service was not to be settled in some instances until the unification of Germany in 1871. The change from a feudal to a capitalist mode of production was thus a long and difficult process which caused much disruption and hardship. In some areas, such as the Rhineland and Schleswig-Holstein, the transition was much smoother, but mostly the old order gave way to the new reluctantly, and reform was woefully incomplete.

Agriculture

Throughout most of Germany the old three-field system with summer crops, winter crops and fallow was still used. Yet with primitive farming methods, the shortage of cattle, and consequently of natural fertiliser, and inadequate supplies of winter feed, usually more than one-third of the land lay fallow. The steadily increasing population and the growth of the towns increased the demand for agricultural produce, particularly dairy products and beef. This in turn emphasised the need for more efficient feeding methods and underlined the backwardness of German methods when compared to British agriculture.

Attempts had been made to improve productivity. Frederick the Great had used the fallow lands of some of his estates to produce feed crops, and tried to introduce English methods of farming, but his example was not widely followed. The most influential figure in the movement for the improvement and modernisation of agriculture was undoubtedly Albrecht von Thaer, whose four-volume study, *The Principles of Rational Agriculture*, was published between 1809 and 1812. As the title of his book suggests, Thaer was very much a man of the Enlightenment who wished to break with outmoded traditions from the past and start afresh with a new science of agriculture that would be logical, reasonable and fully scientific. But he was also very much a man of the nineteenth century. Thus at the beginning of his book he defines agriculture as 'a profession the purpose of which is to make a profit or to earn money by the production, and sometimes by the processing of, vegetable and animal substances'. Thus Thaer called for the complete abolition of all feudal residues on the land, and the introduction of a thorough-going scientific and capitalist agriculture.

Thaer was an enthusiastic supporter of the intensified three-field system which used the fallow for crops like potatoes or clover, but he also wanted to go beyond these improvements and introduce a system of crop rotation that would greatly increase the intensity of agriculture and cause a dramatic rise in output. Under the intensified three-field system there was also a rotation of crops, usually two different forms of

grain followed by the fallow crop. With Thaer's system every corn crop was followed immediately by a fallow crop, thus the ground was better worked over, better weeded, and because of the increase in fodder, better dunged. Crops tended to be of better quality with a higher return per acre. The disadvantage of the system was that it made much greater demands on the land and on the farmer, so that the initial outlay both in money and in labour was greater. Marginal farms were unlikely to risk such a major departure from traditional methods, and in many cases were lacking the reserves to take such a step. As the land was mainly of poor quality and as the landowners were mainly concerned to produce for the grain market, a more complex rotation system was hardly possible or desirable.

In some parts of Germany these English methods of crop rotation had already been introduced, but only on a very small scale. Thaer was thus not the first to bring these ideas to Germany, but he was the first systematically to introduce his countrymen to them and he did so at a time when the improvement of agricultural production was essential if Germany were to develop economically. Thaer also insisted that such an improvement was not possible on the basis of crop rotation alone, but improvements in agricultural machinery and in the fertilisation of the land were also imperative. On the subject of fertilisation, Thaer adhered to the erroneous but widely held humus theory, by which it was believed that plants were fed solely by rotting vegetable or animal materials, a theory which was not to be displaced until 1840 with the publication of Justus von Liebig's work on the use of organic chemistry in agriculture.

Although by profession a doctor and by birth a Hanoverian, Thaer played an important role as adviser to the Prussian government at the time of the reforms of Stein and Hardenberg. He founded the first agricultural academy in Germany at Moglin near Berlin in 1806, the first of a series of similar state-financed institutions which were to play an enormously important role as research centres and which were to make Germany one of the leading countries in the field of agricultural research.

Agricultural progress was not only the result of the abolition of feudalism and the work of reformers like Thaer, it was also a consequence of political exigencies, of which the most significant was Napoleon's Continental System. The wool export market was destroyed, and farmers were forced by economic necessity to turn sheep farms into dairy farms, thus increasing the need for fodder and giving further impetus to an intensified crop rotation. The Continental System also

acted as an incentive to the suger-beet industry. As early as 1747 Andreas Sigismund Marggraf of the Berlin Academy of Sciences had argued that a viable alternative to sugar-cane could be grown in Prussia, but it was not until 1801 that his pupil, Franz Karl Achard, grew the first sugar-beet crop on an estate that had been granted to him by the Prussian King, Frederick William III, in an attempt to make Prussia independent from the importation of sugar. In 1809 Achard published his treatise on the sugar-beet which covers all aspects of the production of sugar.

At first the attempts to create a sugar industry in Prussia were bitterly disappointing. Only 3 per cent of the gross weight of the beets could be converted into sugar, which made the whole enterprise uneconomic. Achard was ruined when in 1810 the Prussian state decided that it could no longer afford to subsidise his estate, and he died in 1821 in abject poverty. The Continental System saved the industry, although it was only able to survive by the ruthless exploitation of labour. With the defeat of Napoleon, the market was flooded with sugar which had been stockpiled in England, and it was not until the 1820s that the German sugar-beet industry revived somewhat, but in the meantime the French had moved far ahead in the field. By 1850 Prussian output had increased to 53,000 tons, using 7.2 per cent of the beet. The industry was to expand dramatically in the second half of the century, so that by 1909 over two million tons of sugar were produced, and extraction methods had improved to the point that nearly 16 per cent of the beet could be used.

Although improvements had been made in animal-breeding, particularly in sheep with the introduction of the merino, the over-all standard was very low. Average weights were about half those reached by the end of the nineteenth century and milk production per cow also doubled in the course of the century. Animals took longer to mature and herds were thus less efficient, for farmers had to keep more animals, thus placing a greater strain on their limited resources.

A knowledgeable observer of contemporary conditions on the land, I.G. Koppe, noted in 1839 that definite progress had been made since the beginning of the century. Techniques had improved, and animal stocks had grown larger. Horses had largely replaced oxen as draught animals, which resulted in improved productivity. But he also admitted that much was still to be done, and many areas seemed hardly affected by the changes. Thus, although much production still took place on virtually self-supporting estates which only sent a small surplus for exchange on the market-place, and allotments and kitchen gardens

played an enormously important role, even in large cities such as Berlin where much of the population also kept a pig or a cow in the backyard, the productive forces of agriculture were moving slowly but noticeably forward. Agriculture was the leading sector of the economy, not only in relative importance, but also in terms of the improvement of productivity.

The Guilds

At the beginning of the nineteenth century, life and labour on the land were determined by the still feudal relationships between lord and peasant. In the towns it was determined by the guild system, which dated back to the Middle Ages. The monopolistic rights of the guilds had long been regarded by reformers as a major obstacle to economic progress. The very existence of such organisations was contrary to the basic principles of economic liberalism, which were beginning to take hold in Germany thanks to the efforts of economists such as C.J. Kraus, H.L. von Jacob, J.F.E. Lotz and G. Sartorius. More obvious, perhaps, were the restrictive rights of the guilds which were able to forbid the formation of companies, limit the number of apprentices, stop the introduction of new and improved machinery and techniques, and fix prices. These rights were bitterly resented by those who did not enjoy the protection of the guilds, and were rightly seen as serious barriers to economic progress. Governments had attempted to circumvent the rights of the guilds by creating 'free masters' – master craftsmen who were licensed by the state and not by the guilds – and had usually managed to exclude the guilds from the state-controlled manufactories. Neither course was particularly successful. The free masters were deeply resented by the guild masters, were unable to take on apprentices, and were subjected to all manner of harassment. The state manufactories mostly failed as a result of the upheavals of the Napoleonic wars. It now became clear that if more advanced methods of production were to be used, if industry were to flourish, if trade were to expand and the ideas of economic liberalism triumph, then the privileges of the guilds and state monopolies would have to be ended. Every man should have the right to pursue the trade of his choice and the restrictions on the employment of labour, the use of machinery, privileges and support from the state would be abolished. Careers would be open to the talents, success and failure determined solely by market forces.

This spirit behind the reforms can be clearly seen in the instructions given to the provincial governments in Prussia in 1808 which read in part: 'everyone must be allowed to develop their inclinations, abilities and powers as freely as possible, and all existing obstructions to this

must be removed as soon as possible in a legal manner.' Thus with the trade tax edict of November 1810, and the law on the policing of the trades of September 1811, the Prussian guilds lost their privileges. It was no longer necessary to be a guild member in order to practise a trade, it was sufficient to be a citizen in good standing and to pay a trade tax. The guilds were not forbidden, they continued as free private associations for the mutual benefit and support of their members, but they were no longer obligatory. Thus an important barrier to the development of industrial capitalism was removed, for previously a factory owner had either to be a member of a guild and abide by the regulations of that guild or, as was more often the case, seek a concession from the state. These requirements no longer applied, manufacturers were not obliged to employ guild members and could recruit labour on the free market. Conversely, labour no longer enjoyed the protection of the guilds and was abandoned to the tender mercies of the employers.

The effect of the freedom of trades (*Gewerbefreiheit*) on the development of industry was very long-term, the immediate effects being less dramatic. Any artisan could now open a workshop without being a member of a guild, but few took advantage of this new freedom. In some less skilled trades such as dairyman, innkeeper or showman, there was a marked increase as a result of the reforms. In the more skilled trades there was an increase which quickly tapered off after the first two years, and the number of new workshops reverted to the average of the period before the reforms. Part of the reason for the rather modest effect of the reforms was that the old guild system had already lost much of its power and influence. The exclusion of craftsmen from the area surrounding the towns, and the *numerus clausus* within the guilds, both of which had been major factors in restricting the number of craftsmen, had long since been abandoned, prompting one historian to argue that the reform did little more than legalise an already existing situation. Nor were all the old restrictions abolished at one fell swoop. Even in Prussia many trades were excluded from the provisions of the law, the application of the law was often postponed, and the guilds were still able to exercise considerable influence even though they had lost most of their formal authority. In south Germany it was not until the 1860s that full freedom for the trades was achieved. In some areas, among them the Hansa towns, Hanover and Electoral Hesse, the political reaction after 1815 also saw the reimposition of the old restrictions on craftsmen and artisans and the affirmation of the authority of the guilds to control the trades. Areas which had been occupied by the French, such as the

Rhineland and Westphalia, were completely free, whereas in Saxony the guild system was untouched by reform.

The situation of the German artisans and craftsmen in 1815 is thus just as difficult a subject for generalisation as are conditions on the land. Conditions differed widely, not only in the different states, but also in the provinces of the larger states, such as Prussia. The old ideal division of labour between the towns (manufacture and trade) and the country (agriculture) had long since disappeared. Complete freedom no more existed after the reforms than complete control had existed beforehand. There was probably less general enthusiasm for the reform of the handicraft system among the bourgeoisie than there was for the liberation of the peasants. The artisans resisted change, fearing the loss of the security of the guilds, the competition of a freer economic system, and the challenge of mass-produced industrial goods. The reform was the work of liberal civil servants who were fully committed to the ideas of economic liberalism. Men of property were uncertain in their attitude towards the artisans, just as they were suspicious of the new age which seemed to be dawning. They welcomed the new freedoms and opportunities and the diminution of the importance of birth and privilege, but they also feared that the changes were too abrupt, that society would be prey to new and more violent tensions, and that freedom also involved uncertainty and risk. In influential circles the optimism and enthusiasm of the age of enlightenment gave way to scepticism and a weary nostalgia for the 'good old days'. Artisans who opposed the new economic order thus could win the support of conservative aristocrats who feared the social and political consequences of a liberal economic policy and of those sections of the bourgeoisie who felt that the changes had been too abrupt. All those who saw industrial society as a threat to their economic well-being and their social status began to demand the reintroduction of controls and restraints. These opponents of the liberal economic order found no difficulty in producing telling arguments against the system. Full economic freedom meant freedom to the economically strong, but disaster to the weak and the poor. Conservatives contrasted a grossly sentimentalised picture of a patriarchal and ordered society in which everyone had his place and was protected against hardship by collective responsibility, to a new society where the industrial capitalist, red in tooth and claw, was free to exploit and swindle the weak and pile up vast wealth at the expense of others, and society dissolved in struggle and bitterness.

Although the statistical evidence is scanty, it would seem that

between 1800 and 1843 there was only a slight decline in the percentage of the total population employed in handicrafts: 14–15 per cent in 1800; 12.8 per cent in 1843. The figures for 1843 show a slight increase over those for 1816 when the percentage was 11.6. The interpretation of the significance of these figures differs widely. Some historians argue that they indicate that the artisans were able to keep pace with industrialisation and that in spite of the customs union (*Zollverein*) and the railway boom, the handicraft industries continued to play an important role in the economic life of Germany. Others argue that the freedom from the old guild restrictions resulted in many trades being overmanned, consequently depressing the standard of living of the artisans. Thus, although there was a steady influx into some handicraft trades, many artisans became proletarianised and were obliged to find work in the new factories, where they worked alongside recent migrants from the rural areas.

A large number of the artisans lived a marginal existence in wretched and overcrowded houses with little hope for the improvement of their condition. Many were forced to send their wives and their children to work in workshops and factories where they competed with labour from the rural areas, thus forcing down wage levels and contributing to the very evil which by their labour they hoped to overcome. This situation was further exacerbated by the increase of population. Population growth, coupled with the increasing use of women and children, resulted in a larger work-force which was not compensated by increases of output and productivity. The resulting growth in poverty was a matter of widespread concern. Contemporary writers were almost unanimous that the standard of living of the working population declined between 1800 and the 1840s, and most historians accept this verdict. Unemployment and poverty became pressing social problems and the fear of being forced to join the ranks of industrial labour became all the more intense. This harsh new relationship between employer and employee, unmediated by the ties and obligations of traditional society, was used by conservatives as further evidence of the evils and perils of liberal society, and their demands for a return to the certainties and the order of the past found wider support.

Some trades were able to maintain their position, or even to thrive, in these changed circumstances. With the process of industrialisation there was a decline in the amount and the variety of things produced in the home. Less bread was baked at home, and thus the baker's trade was able to expand. Much the same was true of butchers, tailors

and the building trade. Yet although the handicrafts survived, and some even flourished, most artisans felt that they were doomed. Unable or unwilling to learn new trades, or to specialise in the production of commodities which as yet were not suited to industrial production, the artisans faced the destruction of their way of life and a loss of their independence. The result was a growing frustration and hostility among the artisans, which was to find expression in artisans' riots and later in the revolution of 1848, in which the artisans played such an important role.

The Development of the Capitalist Mode of Production

Freeing the trades from the restrictions of the guilds and the abolition of feudalism on the land was not enough to create a modern industrial society. There can be no doubt, however, that both were significant preconditions for such a development and a clear recognition and affirmation of social and economic changes which had taken place. Germany was neither an industrial state in the sense that industry played a more significant role in the economic life of the country than did agriculture, nor were most manufactured goods produced by industrial enterprises. Cottage industry, putting-out work (the system of the *Verlag*) and the countless workshops of the artisans accounted for the bulk of manufactured goods. The individual worker often owned the means of production and frequently worked for more than one employer. Usually he spent part of his time working his modest holding and was thus closer to the peasantry than to the modern industrial proletariat. Industrial enterprises were thus somewhat exotic exceptions to urban handicrafts and rural cottage industry. Even as late as 1815 it was difficult to say whether the existence of modern industrial enterprises in Germany were to remain the exception or to become the rule. It took far longer in Germany than in England to lay the groundwork for industrialisation. It is possible to discern the beginnings of this process in the 1780s, but it is hardly possible to talk of industrialisation in Germany until the mid-1830s. Social formations which had been incompletely changed during the reform period still acted as a brake on economic development.

A further serious hindrance to the development of industrial capitalism in Germany came from the difficulties and shortcomings of agriculture. In the late eighteenth century agriculture had thrived. The increased demand for agricultural produce by a rapidly industrialising Britain resulted in a healthy export market, particularly for wool and corn. This demand increased still further in the early stages of the

French revolutionary wars, with the result that enterprising landowners were able to make substantial profits, the value of agricultural land increased markedly and many aristocratic landowners began to dance around the golden calf of land speculation. Napoleon's Continental System caused a serious disruption of the export trade, and the invading armies slaughtered animals and plundered stocks. Some landowners were able to make handsome profits by providing supplies to the army, but in general agriculture suffered badly from the results of the war. This had the effect of negating some of the positive effects of the reforms and, faced with such uncertainty, farmers were reluctant to invest more than they deemed absolutely essential, and agricultural production was often kept at a minimum.

This cutback in agricultural production during the war made it all the more difficult to expand after 1815. The exceptionally cold and wet summer of 1816 caused a disastrous crop failure. When agricultural production began a marked improvement in the following years, partly as a result of excellent weather conditions, and partly because of an increase in investment in the land, often by the new bourgeois landowners, it became increasingly difficult to find markets. Lower wages depressed domestic demand and the enormous increase in the productivity of British agriculture achieved during the Napoleonic wars made it difficult for German producers to regain their position in the British market; it became almost impossible with the passage of the Corn Laws. Sweden, Spain, Holland and Italy had all improved their agricultural output during the period of the imposition of the Continental System, and both France and the Netherlands soon followed the British example of imposing import duties on corn, so that it was almost impossible for German grain producers to find alternative markets. As a consequence, grain exports from the most important Prussian ports, Danzig and Elbing, fell by 1825 to one-seventh of the average between 1801 and 1805.

One important branch of agriculture managed to expand during the agricultural crisis. British demand for German wool increased after the Napoleonic wars, so that exports trebled between 1815 and 1818 and increased more than five times between 1820 and 1825. Throughout this period Germany supplied about half of Britain's requirements for wool. Wool prices remained high at a time when corn prices fell disastrously. By 1825 corn prices were about 25 per cent of the 1817 average, when prices were highly inflated by shortages, and by 1830 were still only half the immediate post-war level, although there was a marked upward trend in agricultural prices after 1825.

In such a situation many farmers switched to sheep-farming. This was particularly pronounced in Brandenburg-Prussia, Mecklenburgh and Saxony, but only the larger landowners had sufficient capital to buy flocks of the improved breeds of sheep. In the long run the change to sheep-farming was self-defeating, for it resulted in an over-production of wool and a consequent fall in prices after 1825, although the collapse of the wool market never reached the catastrophic levels of the corn market.

Other landowners who were unable to sell their corn distilled it into *Schnaps*, but once again the building of a distillery demanded a considerable amount of capital and the end effect was an over-production of spirits which could no more be sold than the corn from which it was made. The only positive effect of this change-over to wool and *Schnaps* was that corn prices began to rise slightly, thus helping to offset the fall in the prices of wool and spirits, but the change was not enough to pull Germany out of the agricultural crisis.

Some of the Junkers were only able to survive the crisis by the generous intervention of the Prussian state which provided some 3 million thalers of aid in order to preserve the aristocracy from ruin. Yet in spite of these measures, 230 estates had to declare bankruptcy between 1824 and 1834 in the homeland of the Junkers, Prussia east of the Elbe. Many estates were sold to the bourgeoisie, which in many instances brought a much-needed influx of capital to the agricultural sector and a consequent improvement of techniques and stocks.

Although these 'bourgeois Junkers', to use Hans Rosenberg's phrase, bought the semi-feudal privileges of police and court rights along with their estates, and although they were quick to copy the mannerisms and attitudes of the aristocracy, they were not accepted as social equals by the aristocracy and were unable to share their status and influence. These new landowners set an example of entrepreneurial farming which forced the Junkers to use modern methods of estate management. In spite of the protection afforded by their legal and fiscal privileges and their easier access to credit, and the exemption of their estates from taxation, the Junkers were only able to survive by paying close attention to the profitability of their estates. The introduction of modern agricultural methods and close attention to book-keeping were the only ways that the Junkers could keep their heads above water. Thus changes in land ownership coupled with the harsh effects of the agricultural depression, which lasted from 1806 to 1837, resulted in a distinct modernisation and rationalisation of the larger estates. The old feudal mode of production vanished, now only profit and loss

determined the fortunes of the landowners. By and large, aristocratic landowners were very successful in meeting the challenge of these changed conditions, and they seldom allowed snobbery or a distaste for the vulgarity of a competitive world to distract them from the single-minded pursuit of profit. Yet with few exceptions, notably in Silesia, the aristocracy remained aloof from the world of industry and trade, looking down on the mere 'tradesmen' (*Koofmich*) as an inferior class, even though their business methods on their estates differed little from those of the industrialists and merchants whom they despised.

Industrial development lagged far behind that of agriculture, and this is particularly true of the textile industry, which had played such a vital part in the Industrial Revolution in England. The leading sector of the textile industry was the cotton industry, an industry which found it exceedingly hard to compete with the superior British techniques, and whose export markets were seriously disrupted by the war. The imposition of a heavy import duty on raw cotton entering Germany by Napoleon was a further blow to the industry. Cotton weaving in Berlin, which produced mainly for the domestic market and had thus not been as badly hurt as the Saxon mills whose markets were mainly abroad, was crippled by this measure. The number of looms in Berlin that were in active use declined from 4,216 in 1806 to only 1,029 in 1808. There was, however, a steady increase in cotton manufacture in the years after the defeat of Napoleon.

Cotton manufacture was mostly carried out in the old manner of simple commodity production by cottage industry and putting-out using handlooms. Spinning was also done at home, usually as part-time labour in the rural areas, using hand-operated machinery. The German cotton industry in the late eighteenth century suffered from much the same difficulties as the English cotton industry. Primitive spinning methods were unable to produce sufficient yarn to meet the increased demand of the weavers. It was not until 1783 that Brüggelman introduced the first water-driven spinning machine at his factory in Ratingen near Düsseldorf. Although he had managed to get hold of an English spinning machine, it was not until he was able to hire an English mechanic that he was able to get it to work. The Ratingen factory was the first spinning factory in Continental Europe, built some ten years after Arkwright's first mill. Brüggelmann was a prosperous merchant with sufficient capital, and the Düsseldorf area was relatively free from traditional restrictions on trade and industry. He took advantage of the remaining privileges of the old system by securing a monopoly from the

Margrave Theodor, but this potentate's authority did not command automatic respect, and the monopoly could not be enforced.

The introduction of spinning machinery in Saxony was somewhat later, beginning in the mid-1780s with locally produced copies of hand-operated spinning jennies. The Saxon government provided funds to craftsmen like Mathias Frey, who appears to have built the first such machine, to encourage production. The Prussian government also encouraged technological innovation, giving the Swiss cotton merchant Hotho the princely sum of 10,000 thalers to improve his factory in Berlin, and also helping him to smuggle machinery from England, which still refused to export machinery.

These modest beginnings in the 1780s in Saxony and in Prussia, due in large part to the initiative of the state, were unable to flourish in the following years owing to the importation of English yarn when, by the early 1790s, English spinners were producing greatly in excess of the amount that could be absorbed by the domestic market. Investment in cotton mills in Germany was therefore hardly an attractive proposition, and only modest progress was made in the following years. Most of the improved machinery was still used at home, factory production being a somewhat exotic exception often viewed by the authorities with misgivings, for they feared that factory production would lead to unemployment and to the loss of tax revenue. The Napoleonic invasion and the Continental System caused further disruptions, but the exclusion of British yarn from Germany offered an opportunity to German spinners, so that in Saxony the number of spindles increased from 13,200 in 1806 to 255,904 in 1812. This expansion occurred under very unusual circumstances, and although there was an impressive increase in the amount of yarn produced, the methods used were not the most efficient and modern, and the yarn was not always of the highest quality. It was not possible for Germany to use this brief period when British goods were excluded from the domestic market to reorganise production so as to be able to compete with England when the restrictions on trade were removed. Thus after 1815 the hand-spinners, who had done relatively well during the blockade, were destroyed by the competition of English yarn and by the new German factories. These factories, which tended to use water power rather than steam engines, began to dominate the spinning industry in the 1820s in a manner which is characteristic of the early stages of industrialisation. Yet because of the slump, the cotton industry was unable to make the dramatic increases in production without which industrialisation and modernisation cannot become an irreversible process. The abundance

of cheap labour and the high cost of fuel were further disincentives to modernisation. Thus in the 1820s much of the groundwork for an Industrial Revolution was laid, but the decisive stage had yet to be reached.

The development of the woollen industry was similar to that of cotton, although technological progress was much slower and the industry tended to stagnate throughout the period. Unlike the cotton industry, the woollen industry declined as a direct result of the Continental System and was unable to recover in the post-war years. Wool was still a luxury material for which there was only a modest demand, with the majority of the population suffering from the consequences of the agricultural crisis and the industrial slump. The German wool trade was unable to match the quality of English wool, and there was thus little opportunity for selling abroad. Technical advances were made during the post-war years, although hand-operated machinery was still the rule, but there was little incentive to invest in a stagnating and demoralised industry. A more specialised luxury trade, the silk industry, which had prospered in Berlin in the years before the Napoleonic invasion, was destroyed by the French in 1806, was revived after 1815, and prospered in the 1820s. Although the Jacquard loom, invented in 1804, was introduced in Berlin, the industry by and large stuck to old methods and techniques, so that although the silk industry was a modest success it was not a significant force for innovation and change.

Although Germany was to become one of the very greatest heavy industrial powers, there was little sign in the early part of the century that heavy industry and mining would one day thrive. In the iron and steel industry traditional methods were still used, and German industrialists were slow to introduce the more modern methods which had been developed in England. Charcoal rather than coal was used as a fuel for the furnaces, and it was not until the 1850s that coke was used in the west in the iron and steel industries. In Silesia the iron and steel industry had made greater advances in circumstances which were somewhat unusual for Germany. Some of the great landowners followed the example of Count Reden and built ironworks on their estates and exploited the coal and ore deposits of the region. These Silesian magnates had no concerns about the loss of caste by entering trade and industry. They had access to sufficient sources of capital so that their works were the most up-to-date in Germany. They were also able to apply the feudal relationship of landlord and peasant to industrial relations, so that the workers in their mines and forges were

in a state of dependence upon them. A significant part of Silesian industry, particularly the coal mines, was under state control and this sector was the most technically advanced. A coke-fired furnace was built in Gleiwitz in 1796 under Reden's supervision for a state-owned ironworks. Yet the puddling process, which was in wide use in England since the 1780s, was not introduced in Silesia until 1828. Even the efforts of the great Silesian nobles, Henckel, Thiele-Winckler, Pless, Ratibor, Colonna and Renard were not enough to meet even the modest domestic demand for iron, and the German market offered further opportunities for the more forward-looking Belgian industry, which in turn was to become both a challenge and a threat to Germany and a stimulus to renewed effort.

Although the iron and steel industry had been badly hit by the Continental System, and domestic demand remained low, the machinery industry was in its infancy, iron was not yet used in construction and the railway boom had yet to begin, and although growth was severely restricted by poor transportation facilities and the distances between sources of ore and sources of coal, modest progress was made in the early part of the century, even though the starting-point was very low. Iron production rose by 62 per cent from 1822 to 1834 when Germany produced 110,106 tons compared to 678,417 tons in England. By 1830 Germany was producing just under 1.5 million tons of coal, when England was producing 22.4 million tons.

One of the essential preconditions for the Industrial Revolution was the widespread introduction of the steam engine. A steam engine based on the improved Watt model was first used in Germany on 23 August 1785. The story behind this engine is instructive. The Prussian government sent a civil servant, Bückling, to England to spy on the Watt engine, and as a result of this industrial espionage the government built the engine in its own factory in Berlin. The first model failed to work, and it was not until the inevitable English mechanic could be brought over from England that the engine could be used. The mechanic, Mr Richards, then took over the direction of the Berlin works.

These early German engines were used mainly for pumping out mine shafts. The mines of Upper Silesia provided a healthy market and encouraged an indigenous machine-building industry, of which the most notable was H.F. Holtzhausen's factory at Gleiwitz. Bückling built the first steam engine in the Ruhr for a state-owned mine in 1789. Another artisan, Dinnendahl, started the production of steam engines in the Ruhr, but his enterprise rested on very shaky financial foundations, as he was forced to rely on the credit of his clients as a