Shop floor and office staff of the bayonet workshop, Tula armaments factory, circa 1900. 
Gosudarstvennyi Arkhiv Tulskoi Oblasti (GATO) fond 3097, opis 3, delo 126.
Teplov metal-working factory in Tula, circa 1900. Gosudarstvenyi Arkhiv Tulskoi Oblasti (GATO) fond 3097, opis 3, delo 68.
THE WORKING CLASS OF TULA IN LATE NINETEENTH CENTURY RUSSIA, 1880-1900

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A thesis submitted for the degree of Doctor of Philosophy of THE AUSTRALIAN NATIONAL UNIVERSITY August 1994
Declaration

This thesis contains no material which has been accepted for the award of any degree or diploma in any university, and that, to the best of my knowledge and belief, the thesis contains no copy or paraphrase of material previously published or written by another person, except where due reference is made in the text of the thesis.

Alexander Trapeznik
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I conducted most of my research in the former USSR where I participated on the Australian National University (ANU) - Moscow State University (MSU) Scholar Exchange programme during 1990-1991. At the time I worked in the V. I. Lenin State Library, the State Public Historical Library, the M.E. Saltykov-Shchedrin State Public Library in Leningrad and the Library of the Academy of Sciences. Archival research was carried out in the Central State Archive of the October Revolution, the Central State Historical Archive in Leningrad and the State Archives of the Tulsloi Oblast in Tula.

Affiliated with MSU, I had the privilege of working with Svetlana Voronkova. For their hospitality, assistance and advice, I am particularly grateful to the archivists in Tula, Nikolai Fomin, Liudmila Zakharova and Irina Antonova. At the Central State Historical Archive in Leningrad, Serofima Varekhova cheerfully complied with my numerous requests and provided much useful advice and assistance. I am grateful as well to the staff of the ANU libraries and the National Library of Australia where preliminary research was conducted.

To my supervisor, Dr Elizabeth Waters, I would like to express my gratitude and appreciation for her encouragement and guidance.

I would also like to thank my parents for their support throughout the course of this study. Finally, my wife Virginia, has contributed more than anyone in making this thesis possible. It is therefore appropriate that I dedicate this work to her.
ABSTRACT

This work is a socio-historical study of the Tula working class between 1880 and 1900. It adds a further regional dimension to the burgeoning scholarship of social historical studies of the worker question within Russian historiography and because of the importance of the labour working class during this period of concentrated industrialisation and worker politicisation, this study seeks to provide a portrait of Tula worker society.

The investigation will initially focus on the historiography of the Russian working class, its historians and theories of social change. The industrial history of Tula and the surrounding province is presented, which highlights the role played by foreign entrepreneurs in Tula's early industrial development. Secondly, Tula workers themselves are examined together with their background and what motivated their journey to Tula. The composition of a Tula working class family is analysed, the social and economic ramifications of living in Tula are explored and material is presented on family life, on marriage, and on patterns of residence and household composition. The issue of the permanency of worker ties to Tula is investigated as is that of an hereditary proletariat. Finally, material is presented on cooperatives, mutual aid societies and the incidence of worker unrest. How these developments and events influenced or hindered Tula workers' capacity for collective action and class consciousness is also explored. The study concludes with a summary of the issues raised, in terms of an examination of the interaction between the forces of innovation and tradition, of continuity and discontinuity, in Russian society.
A NOTE ON TRANSLITERATION AND DATES

The system of transliteration adopted here is that of the Library of Congress. In the interest of simplicity, diacritical marks are omitted: thus Tulskoi (not Tul'skoi), and kustar (not kustar'). Where appropriate, common English usage has been adopted for certain proper names.

Where events in Russia occur before 1 February 1918, they are dated according to the Julian (Old Style) calendar then observed there, which in the nineteenth century ran twelve days, and in the twentieth century ran thirteen days, behind the Gregorian (New Style) calendar in use in Western Europe. The change-over in Russia to the Western calendar occurred on the day following 31 January 1918 (O.S.), which was declared to be 14 February (N.S.).
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Chapter 1

The Russian Working Class, Its Historians and Theories of Social Change
The momentous events of 1917 occurred over seventy years ago and yet historians are still evaluating, examining and identifying the protagonists of those events. The working class has always been the pivotal social group of the revolution from the Soviet point of view. Recent Western histories have begun to recognize clearly its essential position in the revolutionary drama but the nature and social identity of this dynamic group has remained elusively beyond the grasp of both Soviet and Western generalizations.

Until recently, a Western historiography of Russian labour scarcely existed. What little we did know of Russian workers tended

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1 There has been no general synthesis of the history of Russia's workers, no "making of the Russian working class." While historians have long spoken of a working class and discussed the finer points of "spontaneity versus consciousness," only recently has the elementary work of the social history of Russian labourers been undertaken. Already such practitioners as Reginald E. Zelnik, Labor and Society in Tsarist Russia: The Factory Workers of St. Petersburg 1855-1870 Stanford University Press, Stanford: 1971; Victoria E. Bonnell, Roots of Rebellion: Workers' Politics and Organizations in St. Petersburg and Moscow, 1900-1914 University of California Press, Berkeley and Los Angeles: 1983; Robert Eugene Johnson, Peasant and Proletarian: The Working Class of Moscow in the Late Nineteenth Century Rutgers University Press, New Brunswick, N.J.: 1979; and Leopold H. Haimson, "The Problem of Social Stability in Urban Russia, 1905-1914," in Slavic Review, 23, no. 4 (December 1964): pp.619-42 and ibid., 24, no. 1 (March 1965): pp.1-22; have sketched in important aspects of that history: the origins of the St. Petersburg working class, the complex migration between Moscow and the countryside, the trade union movement in the capitals, and the explosion of strike activity on the eve of World War I.


to be not so much about their lives and work, but rather about their leaders and the party politics of the Russian proletariat. Historians looking at workers in the revolutions of 1905 and 1917, such as Allan Wildman, Richard Pipes, and John Keep focussed their attention largely on the leadership of the labour movement. In an effort to untangle the complex issue of "consciousness versus spontaneity," they concentrated on the internecine theorising of the Social Democrats. While we cannot fault the importance of understanding the role of the Bolsheviks and Mensheviks in politicising the masses, this body of scholarship, however, has ignored the social condition of the working class and its outlook. Assuming a division between worker intelligenty or skilled workers and unskilled workers, these studies had little to say about the situation of the vast majority of workers.


Western historians have shown inadequacies of conceptualisation and categorisation. Theodore von Laue has provided an example:

The peasant worker in the textile industry remained on the peasant side of the divide; those in the metal and machine industries advanced beyond.⁶

Two unsupported conceptions are inherent in this statement. Firstly, the author has assumed that there is an identity common to all textilists and another identity common to all metallists, and further, that the similarities between any two textilists would overshadow any possible similarities between a textilist and a metallist. Secondly, he has decided that metallists, across the board, were a far more urbanised group than the textilists. These views echo the common, but unexplored, interpretation which is pervasive in both Soviet and Western works: more skills mean greater proletarianisation and consequently more militance.

To historians in the West, and in particular, to American scholars of the 1940s to 1960s, work in Russian history has, unfortunately, fallen into a counter-Communist tradition. The field’s orthodox paradigm, “totalitarianism,” was itself a constituent part of America’s anti-Communist consensus. As a result, work undertaken centred mostly on regime studies, not on real social studies. It lacked, for example, both social history and political sociology. Excluded or obscured were the social factors that underlay change in historical and contemporary politics. The totalitarian tradition saw no meaningful differences or discontinuity existing between Bolshevism and Stalinism, which it considered to be fundamentally the same both

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politically and ideologically. Any difference was seen as being only a matter of degree resulting from changing historical circumstances and a regime's need to adapt. Bolshevism and Stalinism, according to this consensus, were the logical, rightful, triumphant, and even inevitable, continuation or outcome of totalitarianism. This historical interpretation during the period, when applied to the subject of Bolshevism and Stalinism, was axiomatic in almost all scholarly works on Soviet history and politics. E.H. Carr's voluminous and valuable writings, though demonstrating a degree of empathy for the 1917 Revolution, are nonetheless flawed by his tacit justification of the whole Stalin area through a selective periodisation and choice of facts, by the use of Soviet-style euphemisms to characterise major events, and by the exclusion of a full evaluation of both alternatives and outcomes. This approach led Carr to the cold-war axiom that Stalinism was the only rational and feasible fulfilment of the Bolshevik revolution. Issac Deutscher who was more partisan with respect to the revolution, for other and more complex reasons also saw a fundamental continuity between Bolshevism and Stalinism.

Richard Pipes' contribution to this tradition was to argue that the antecedents of Soviet totalitarianism were rooted in the Tsarist regimes of the nineteenth century.


Between 1878 and 1881 in Russia the legal and institutional bases were laid for a bureaucratic police regime with totalitarian overtones that have not been dismantled since.\(^9\)

Significantly, absent in Pipes' analysis of the political behaviour of the principal social groups are workers. Similarly, E.H. Carr also avoids any mention of the workers' question. Whilst preceding Pipes and Carr, Bernard Pares, founding father of the study of the revolution in Britain, writing in 1939 also views history from above: "The cause of the [tsarist] ruin came not at all from below, but from above."\(^10\) The same approach can be found in successive studies published between the 1950s and 1980s by Leonard Schapiro, for long the doyen of Russian studies at the London School of Economics and one of the most influential western historians of the revolution.\(^11\)

Over the past twenty-five years a social history of tsarist Russia has begun to emerge. Reginald Zelnik's work is a very important place to begin, though his emphasis in Labor and Society is more on the attitude of the government toward workers than on the workers themselves. James Bater's St. Petersburg in the mid-1970s provides important details of urban life but the focus of his attention is on institutions and urban technology rather than on the realities of working class life. Leopold Haimson's view of the potential revolutionary situation in 1914 is marred by his unexamined generalisations of "mature" and "immature" workers.\(^12\) Through the

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emphasis these authors placed on the proletariat leaders and their concerns we see an often deeply distorted image of the rank-and-file worker, not least because the authors' ideological concerns colour their presentation of material. Only now is a new generation of historians beginning to study these workers and to sketch the main lines of their work and family life. A social history of Russian labour is beginning to emerge, but this must rest firstly on detailed geographical and sectoral studies of the working class.13

Recent scholarship has focussed on the aspirations, organisations and actions of urban workers and on uncovering the relationship between labour unrest and political events and developments throughout the Russian Empire, especially in the two capital cities of Moscow and St. Petersburg. The world of the worker in a provincial town, however, was very different from the worlds of

Russia's two largest cities and we are only just beginning to be informed of the shape of that world. The two major cities were quite different. St. Petersburg, the larger, was more technologically modern, and heavily dominated by the metal industry. Moscow, a more traditional city, was much more complex both socially and economically. Both, of course, drew in huge numbers of rural poor.

In St. Petersburg and in Moscow, workers were found at various stages of development. A few, residents of the city for a number of years, were highly skilled, educated, and self-confident. In the 1890s, however, most were recent arrivals from the countryside with few or no skills and a limited education, if any. Often termed


the "grey mass," these unskilled workers contrasted sharply with the tiny "labour aristocracy" of the highly skilled. This great differentiation within Russia's working class was a product of "telescoping development" or "combined development," which, in turn, resulted from Russia's late but rapid industrialisation.

A major item for debate among recent scholars of Russian labour history is the extent to which the working class formed a proletariat before 1917. Robert Johnson stresses the strong link between city and countryside, and believes that Russian labour's development can only be understood in terms of its roots in the countryside. Throughout the reign of Nicholas II, peasants formed a large and distinctive element within the working class. Victoria Bonnell, for her part, holds that the numbers of urbanised workers with relatively few ties to the countryside, a true hereditary proletariat, grew during the first part of the twentieth century and became the predominant part of the working class by the eve of World War I. Her research indicates Russia's "labour aristocracy" rarely numbered more than ten per cent of the urban work force at any time, but it played a role far larger than its numbers would indicate in the activities of socialist political parties and trade unions. Studies by Laura Engelstein and Diane Koenker of the revolutions of 1905 and 1917, respectively, substantiate many of Bonnell's arguments. Stephen Smith, in his study of Petrograd in

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17 According to the theory of "telescoping development," late but rapidly modernising nations compress their stages of development, so that one stage quickly moves into another stage. Also, two or more stages may occur simultaneously (combined development).
1917, points out that the work force in Russian cities changed dramatically in the course of World War I.20 Thousands of young, unskilled, male workers and increasing numbers of women workers flooded into the labour market. The tie between the city and the countryside remained strong in this period, but it does appear that by the end of 1905 it was possible to speak of the existence of a large proletariat, especially in St. Petersburg.

Historians such as L. Engelstein, G. Surh, V. Bonnell, K. Prevo, and R. Weinberg have been especially interested in studying the interaction between socialists and workers and the extent to which labour protest and strikes were spontaneous in origin or the result of an orchestrated campaign conducted by the intelligentsia and socialist-workers. They have also examined the impact of skill, gender and degree of urbanisation on the form and content of the labour movement and how violence affected the dynamics of labour protest and other forms of workers' collective action.21

We now have a much fuller account of the worker's world. Many topics are familiar ones: hours, pay, working conditions, fines levied by employers, and living conditions, for example. Some new questions, however, have been asked and the answers have given us a better sense of the limited leisure opportunities open to workers.

We are beginning to learn more about working class literacy and to gain information on the importance of alcohol and religion in the proletarian milieu. Most workers did not share in the social and cultural delights of Moscow or St. Petersburg. Male workers tended to gravitate toward the bottle, female workers to the church. What is surprising is the large number of workers who made great sacrifices in order to gain the rudiments of an education and to participate in meetings of local workers' clubs and other organisations.22

The study of Russian history in the former Soviet Union provides a vivid example of the inadequacies and deficiencies of its labour history. The raison d'etre of Soviet historiography has been to describe the raising of consciousness of the working class. The narrow ideological framework within which work in this area has unfortunately fallen means the end product is often flawed and deficient. Since perestroika and the break-up of the USSR a new generation of historians has jettisoned the old orthodoxy with its triumphant celebration of Lenin's genius and the infallible leadership provided by the Bolshevik party. Professional historians initially responded much more cautiously to the challenge of glasnost than their colleagues in literature, journalism and cinema. Whereas the 1930s are rapidly being rewritten, the orthodox version of 1917 and events leading up to it at first largely withstood the tide of perestroika.23


While Soviet historians archival investigations provided a wealth of information and detail on the working class lifestyle, the working class was not considered a unit in its own right but was, instead, evaluated in the context of an artificially constructed framework. At the same time, the institutions and cultural mores seen by the workers themselves as shaping their lives were ignored or minimised. Moreover, findings such as those which suggested that new recruits were the revolutionary catalyst to agitational movements, were disregarded as they would have undermined the hegemony of Lenin and the Bolsheviks.

Indeed, A.G. Rashin, in his classic work, *Formirovanie rabochego klassa Rossii*, used the decline or lack of ties with the countryside as proof of the militant consciousness of the workers. This approach to the development of industrial labour society posits no possible alternative. It also reflects the standard, but unexamined, view that the greater the workers’ levels of skill the greater was their proletarianisation and militance.


24 During the Soviet period from the 1950s onwards Moscow and Leningrad archives were open to Western scholars for pre-revolutionary research, while party archives and archives in provincial cities were mostly unavailable.

Despite a number of criticisms that can be levelled at Soviet research, the writings of Soviet historians have examined many problems relating to the shaping of the working class, its composition and status. Much attention has also been given to the question of the origins of the new recruits into the proletariat's ranks. A comprehensive analysis of the literature on this subject was made by L.M. Ivanov in the 1960s. He commented that researchers, whether discussing the second half of the nineteenth century or the beginning of the twentieth century "adhere in general to one point of view: the village is the principal source of origin and subsequent filling of the ranks of the working class, with craftsmen and artisans next in importance, and lastly, families of workers." Ivanov noted that very few historians recognise the role of workers' families in this process. Most either totally ignore them or ascribe an insignificant place to them.26

Ivanov did not confine himself to a critical analysis of the literature. He was the first to raise, in all its breadth, the question of the significance of continuity in factory labour for a characterisation of the social structure of the working class. He concludes that in the 1880s and 1890s, approximately forty per cent of the proletariat of large-scale industry, particularly in the centre of the country, were hereditary workers. In the twentieth century, when the importance of workers' families as the source for filling the ranks of the proletariat grew even further, they yielded about fifty to sixty per cent of all workers. However, not all Soviet scholars share this conclusion.27


27 It may be that the percentage of hereditary workers was not as high as Ivanov calculated. See S.I. Potolov's review "Rabochii klass i rabochee dvizhenie v Rossii," in Istoriia SSSR, 1967, no. 5, p.192.
Nevertheless, his proposition concerning the ever growing role of workers' families is beyond question.

There has not been a consistent approach taken by Soviet historians on the question of workers' families and their significance in the transition of factory labour from one generation to another. Some works totally avoid the question of generations of workers in factory employment; some confine themselves to citing Ivanov's calculations; some refer only in passing to hereditary workers; and some, even though recognising the importance of proletarian families generally, do not substantiate their conclusions with concrete data.

In addition to the work of Ivanov, several other Soviet works focus attention on the problem of the sources from which the ranks of the proletariat were filled. In Iu. E. Seryi's book on the workers of southern Russia, a special chapter is devoted to this matter. Naturally, the author focusses on a characterisation of the peasantry, the source of the urban labour force of the region, but he also makes an effort to determine the role of workers' families. This attempt is productive but there are far too many ungrounded assumptions in the author's calculations. As a consequence, his conclusions that in the south "about twenty-five per cent of industry's needs for personnel" were

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28 See, for example, S.N. Semanov, Peterburgskie rabochie nakanune pervoi russkoi revoliutsii, Leningrad: 1966, pp.32-57.
satisfied from workers' families, is acceptable only as a hypothesis, warranting further study.\textsuperscript{32}

In a monograph on the workers of St. Petersburg from 1905 to 1907, U.A. Shuster shows that the ranks of the proletariat in the capital were filled primarily from the ranks of peasants, the overwhelming majority of whom later lost real ties with the land. In examining the question of hereditary workers, the author "casts doubt upon the possibility of the shaping of any significant contingent of second-generation workers at the beginning of the twentieth century." The circumstantial materials he draws upon do not persuade us that this conclusion is correct, while facts cited in the work testify that nearly one-fifth of the textile workers at this time were hereditary workers. For the beginning of the twentieth century, this is quite a "representative contingent."\textsuperscript{33}

A monograph by E.E. Kruze comments upon the significance of workers' families as one of "the most important sources of the influx of labour power in the age of imperialism." Moreover, the author regards workers' children, along with "permanent workers who had lost their jobs during periods of crisis and depression," to be the chief and basic source of recruits for the industrial proletariat. However, this conclusion remains declarative and is not supported by corresponding data.\textsuperscript{34} When the only data employed are length of service or ties with the land, this often leads - as it does in the case of this author - to the unanticipated conclusion that there was a high

\textsuperscript{34} E.E. Kruze, \textit{Polozhenie rabochego klassa Rossii v 1900-1914 gg.}, Moscow: 1976, pp.12,139.
percentage of hereditary workers present in addition to lifelong or regular workers.\textsuperscript{35}

The most useful Soviet contributions to labour history have been the collection and publication of documents dealing with labour unrest, and the publication of statistical studies. However, most interpretive studies (the best of which date back to the 1920s) suffer from a predictable tendency to present the history of factory workers in a most heroic light, and to ignore those aspects of Russian labour history that cannot be directly related to the revolutionary struggle. Soviet historians, like their Western counterparts, have not been much interested in the situation of industrial labour during periods of apparent calm or muted, undramatic struggle. They have tended to restrict the object of their research to moments of unrest and defiance and to magnify the significance of these events in order to foreshadow the heroic revolutionary role that industrial workers were to play in later years.

A more significant shortcoming in the work of Soviet historians follows from their overly schematic conception of the historical evolution of the industrial working class. Although there have been significant differences in interpretation, there has been little variety in the basic approach taken. Typically, a strong emphasis has been placed on the degree to which the Russian industrial workers underwent an historical evolution similar to that of their Western European counterparts. Differences are recognised but are usually viewed as epiphenomenal. Broadly speaking, Soviet historians postulate a more or less linear development which began with the penetration of the industrial revolution into Russian

\textsuperscript{35} ibid., pp.144-145.
economic life (usually ascribed to the 1840s) and reached its climax with the conscious revolutionary activity of the fully proletarianised workers in 1917. Seen as important milestones along this path are the emancipation of the peasantry in 1861, which set the stage for completing the process of proletarianisation, and the birth of the Marxist movement in the 1890s, which was the necessary condition for infusing the proletariat with revolutionary consciousness.

This schema has its attractive features and should not be dismissed out of hand. Many important aspects of Russian labour history can be placed within its framework without adversely affecting historical accuracy. Yet, it ultimately fails to provide satisfactory answers to some crucial questions; or perhaps, more accurately, it fails to ask them.

Why were the urban industrial workers of Russia inclined toward revolutionary action in 1905 and 1917? If the cause of their action is given as their advanced degree of proletarianisation, that is, their severance from traditional agrarian and craft occupations, their extensive specialisation and division of labour, and their psychological acceptance of industrial labour as a permanent way of life, then surely the argument is flawed. We know that revolutionary predilections were considerably weaker among the workers of countries where the degree of proletarianisation was unquestionably more advanced.

On the other hand, the degree of proletarianisation becomes germane if approached concretely within the context of the flow of Russian history, and not as a reflection of any sociological law that purports to fix a certain level of development as the threshold of revolutionary activism among industrial workers.
These problems of worker consciousness and protest have not been confined to the study of Russia. In European historiography the discipline of labour history has attempted to focus on the labourer as an independent and rational actor. Labour historians, from Leon Levasseur in the 1890s to Eric Hobsbawn and E.P. Thompson in the post-war period, have demonstrated the significance of the worker in modern European history. Almost invariably, however, these historians have focussed on the worker in relation to institutions or organisations. Despite admirable efforts and refinements, such as Thompson's integrated view of the developing British working class, labour history has, in most cases, consistently tied the worker to the movement of politics.

Recent Western scholarship on Russia, as well as Europe, has a revised orientation towards Russian working class life and has taken a much broader approach to the subject. The studies of families and kinship, of sexual mores, and of leisure time have provided the current methodology and framework. The innovations of recent socio-historical examination have brought a fullness and dynamism to labour history and have focussed attention on those areas of working class life far removed from politics. New studies have centred on housing, the impact of the living environment on individuals, the sexual lives of workers, and the relations between working men and women during the industrialisation process.

The major thrust of recent research on Russia has been to examine history and, in particular, the revolution "from below," to penetrate beneath the world of high politics to developments in the factory, in the village, in the barracks and trenches; to explore the impact made by ordinary men and women upon political developments. Rather than analysing "social" history in isolation
from political developments, as social historians are at times accused of doing, the new historians have dwelt upon the interaction between popular experience and mentality, on the one hand, and the struggle for power on the other. They have taken seriously the aspirations of the masses themselves and credited them with an independence, a sense of direction and a rationality of their own. Influenced by western historians such as E.P. Thompson, and by the *Annales* school in France, detailed monographs have appeared on the way in which the revolution was experienced by workers, peasants, soldiers and sailors.36

One of the main aims of this study is to apply the insights of this history to Russian regional history. To this end, the principal focus will be to examine the working class in Tula, in the latter half of the nineteenth century, during a period of rapid industrialisation, a process of change, for evidence of a collective sense of identity. By focussing narrowly on a single but vitally important city during a short but formative period, it is hoped that our understanding of the role of factory workers in the Russian revolutionary movement and the social and political repercussions of industrialisation37 in the context of the Russian autocratic system may be enhanced.


The programme of state-sponsored industrialisation that began in Russia at the end of the nineteenth century brought about many changes in the non-agricultural economy, but none was so dramatic and fateful as the proliferation of factories and the appearance within them of a large and highly concentrated group of industrial workers. The advent of the factory system was inextricably connected with the expansion of the two major industries of textiles and metalworking, as was the case in Europe in earlier times.

Although there were similarities between the two industries, there were also important differences. Firstly, although both had a high concentration of workers per enterprise with firms commonly employing more than one thousand workers, the make up of the two industries differed greatly. Textiles remained a predominantly unskilled or semiskilled industry, whereas metalworking enterprises employed a high number of skilled workers. In addition, the textile

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38 The precise definition and classification of the factory worker need not concern us here. It is sufficient to note that before 1901 the government designated a "factory" as being any manufacturing enterprise that employed fifteen or more workers or utilised engine-powered machinery. In 1901, the definition of a factory was changed to include only manufacturing enterprises with twenty or more workers, regardless of the type of machinery. These criteria were not, however, applied consistently by the government. See S.N.Semanov, Peterburgskie rabochie nakanune pervoi russkoi revoliutsii Moscow: 1966, pp. 6-17, esp. p.7, n.4.
industry employed a high number of women\textsuperscript{39} and children in their labour force while the metalworking industry was predominantly male. Both industries were recognised as factory-based by the government and, as such, were regulated by specially enacted laws and regulations which differentiated their workers from the rest of the labour force.\textsuperscript{40}

The process of identity formation was, of course, extremely complex in a society that officially discouraged the creation of a permanent stratum of urban workers, disengaged once and for all from their peasant roots. A great many workers maintained some connection with the countryside at the beginning of the twentieth century, but nearly all of them had to reconcile themselves, in one way or another, with the vexing problem of their continuing ties with the village and its traditions, expectations, and social networks. The way in which they dealt with this problem depended, in large measure, upon the position that they occupied in the urban work hierarchy.


The urban labour force itself was highly stratified, primarily along the lines of skill and occupational specialisation. Hierarchical subdivisions existed among various industries and trades. Each industry or occupation also had an internal labour hierarchy. At the summit stood a small but highly skilled substratum such as metal patternmakers in the metalworking industry, fabric cutters in the garment industry, and clerks in the fashionable retail stores catering to a prosperous and exclusive clientele. Below them were placed a variety of skilled occupations which included metalfitters, lathe operators, and smelters in the metalworking industry, tailors employed in custom-made men's and women's tailoring shops, and machinists in the textile mills. The lowest ranks were filled by semiskilled and unskilled workers.

The labour force in skilled occupations was subdivided into apprentices (ucheniki) and qualified adult workers. In trades employing artisans the latter group was further subdivided into journeymen (podmasteria) and master craftsmen (mastera). This arrangement still remained in effect at the turn of the century in both guild and nonguild workshops despite the fact that most journeymen could anticipate only lateral mobility and not an ascent into the ranks of workshop owners.

Prior to the 1880s, several designations of adult factory workers were utilised by the government, factory management, and the workers themselves. The term masterovoi (derived from the guild designation master) referred to the skilled worker whereas rabochii

41 The word rabochii is etymologically a descendant of the Old Church Slavonic word rab, meaning servant, servitor, or slave. The unpleasant connotations of the word, which still carried a distant echo of rab or slave, might have contributed to the workers' resistance to this designation.
applied to semiskilled and unskilled workers alike. Among skilled metalworkers the word *rabochii* was a pejorative term.

Workers attached enormous importance to these designations and were bitterly opposed to the actions of factory management who sought to alter them by eliminating the category of *masterovoi*, reclassifying skilled groups as *rabochie*, and applying the term *chernorabochie* to the remainder.

The hierarchical subdivisions within the labouring population acquired particular significance for its members. This was due, in part, to the fact that the minority of skilled workers stood out so sharply from their unskilled and semiskilled counterparts. In both appearance and demeanour, skilled workers exhibited their differential status.

The relationship between the worker and the village assumed a variety of forms. At one end of the scale were permanent urban workers without any ties at all to the countryside while at the other end there were semipeasant workers with strong ties to their native villages. In general, workers with the highest levels of occupational specialisation and skill were the least likely to have continuing ties with the countryside. Seasonal industries such as tailoring present a partial exception to this pattern since many skilled tailors departed annually for their villages when production subsided, but even here, however, the rate of seasonal return to the village was lower among the relatively more skilled retail tailoring shop workers than among the subcontract workers.

"Transitional workers" with attenuated ties with the countryside comprised a very substantial group in the Russian labour force. Their involvement with rural life was limited to the possession

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42 The prefix *cherno*, meaning "black," was affixed to the word *rabochii* to signify the lowest position within the ranks of workers.
of a house or parcel of land (cultivated by family members or rented out) and the provision of monetary assistance to family members in the countryside. They did not themselves engage in agricultural cultivation and, in many cases, their immediate family lived in the city or the factory village. It was not unusual for such workers to work in a factory or shop for ten, twenty, or even thirty years while continuing to hold a rural passport and to pay taxes for the land in the village.

The location of a worker's family was an important determinant of rural ties. Immediate family (the spouse and children) of male skilled workers, for example, were more likely to reside in the city than the immediate family of unskilled and semiskilled workers. In 1897, sixty-nine per cent of the married male workers in the Moscow's metalworking industry maintained a wife and children in the countryside, whereas the corresponding figure for textile workers was eighty-seven per cent.43

Workers occupied a wide range of positions in the labour hierarchy and they experienced correspondingly diverse standards of living. Wages, of course, showed considerable variation depending on such factors as skill, geographical location, gender, and age. Differential earnings corresponded, in turn, to different consumption patterns and contrasting levels of material well-being. But in Russia, as elsewhere, living standards involved more than just lodgings, food, apparel, and the recreational and cultural activities a worker could procure. These were, to be sure, critical aspects of a worker's life and enormous importance was attached to their quality and availability. However, there was another, less tangible consideration

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that profoundly affected living standards: the extent to which the individual could exercise control over the everyday decisions of his or her life.

In this connection, living and eating arrangements assumed importance. Workers who depended upon the employer for either lodging or food or both rather than providing their own were subjected to a strict regimen, both on the job and during their free time. They forfeited their autonomy during non-working hours and became subordinate to the whims and regulations of the employer, whose unbridled authority in these matters was seldom tempered by paternalistic considerations.

Expenditure on food (excluding alcohol) represented the largest item in every worker's budget, consuming thirty-one to forty-eight per cent of total earnings if the worker were single and thirty-eight to fifty-two per cent if married. Many workers, including even some who did not live in employer-provided housing, depended on the employer to provide meals. In trades employing artisans, shop owners often furnished meals, deducting the cost from workers' wages.

Alcohol was a major ingredient of the Russian worker's daily life both at the workplace, where it was an intrinsic part of many rituals and customs, and outside the workplace, where drinking was the inevitable accompaniment of social occasions and a convenient escape from the dreary and monotonous work routine. Expenditures on alcohol sometimes represented a considerable part of a worker's

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44 N.K. Druzhinin, Usloviia byta rabochikh v dorevoliutsionnoi Rossii (po dannym biudzhetnykh obsledovanii), Moscow: 1958, p. 107. These data are based on three surveys conducted in 1908 involving a sample of St. Petersburg textile workers, workers in a factory in the Bogorodsk district of Moscow province, and workers in a factory in Kostroma province.
budget. Surveys conducted in St. Petersburg and the Central Industrial Region disclosed that textile workers spent two to ten per cent of their wages on alcohol.

With respect to the workers' thoughts of their futures, the vision for some centred around a return to rural life, stripped of the painful features that had compelled many of them to flee the countryside for factories and shops. Others envisioned a blend of rural and factory life that combined the best features of both worlds. For another group of workers, the primary aspiration was to achieve mobility and prosperity within the factory itself. There were even some who sought to flee from their bosses and to set themselves up as independent entrepreneurs.

One theme predominates in discussions of workers' aspirations: the strong desire among workers to achieve more control over their lives, both at the workplace and outside it. In some cases, this meant they desired the relative independence of the peasant proprietor. In others, it meant they aspired to independent entrepreneurship or elevation into the ranks of managerial personnel. During the Revolution of 1905, an image of a new kind of society altogether without peasant proprietors or urban entrepreneurs gained currency among workers. Partly under the influence of radical intellectuals and partly as a consequence of their own struggles with employers and the government, some workers began to envision an entirely new form of social organisation in which they would attain dignity, civil and political rights, and the control over their everyday lives that most were denied under the prevailing order.

The process of change brought about by industrialisation was often difficult. It required continual adjustments to be made on the part of workers; they learned to adapt in ways which altered their
collective identity while not destroying it in the process. The question before us is how best to present and document this identity as well as the dynamics of the workers' responses. Much of the research on nineteenth century workers is guided by assumptions presented by such well known scholars as Alexander Gerschenkron, Reginald Zelnik, Theodore von Laue, and others.

One of the purposes of this research is to suggest that many more local and regional studies must be made in order that the generalisations of these historians who have deeply influenced scholarship on the nineteenth century Russian worker can be negated, altered or confirmed.

A number of questions have to be asked. How did the workers react to change? Were they passive and rarely given to collective protests or was there worker activism and violence? In the case of violent worker responses, if we discern why, when, and where such violence took place, then insights into workers' responses to industrialisation and changing economic situations are given greater clarity and depth. Similarly, where there are non-violent worker responses, by studying the alternatives to violence adopted by the specific worker group or groups, their rationale for non-violent responses takes on added meaning.

Several of the most distinguished social historians of Western Europe, among them Eric J Hobsbawn, George Rudé, Edward P. Thompson, and Charles Tilly,45 have studied the relationship

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between collective violence and social protest in an effort to dispel persistent notions that such violence has been without meaning and rationality. Accepting the view that working class violence had a purpose Daniel Brower has undertaken an investigation of labour violence in Russia to show that it was an indicator of growing working-class consciousness at the end of the nineteenth century. He takes issue with contemporaries who failed to see that violence was as indicative of labour consciousness as were strikes and argues therefore that it should not be condemned as primitive behaviour.46

Resentment, frustration, and anger can be discerned at many historical junctures, but it is only on very rare occasions that such sentiments culminate in mass mobilisation and the spread of revolutionary ideas. Russia at the beginning of the twentieth century, presents one such occasion and it remains, to date, the only instance of a successful social revolution in which urban workers have played a major part.

The literature on workers and revolutionary consciousness offers a great variety of theoretical approaches. However, not all of them are equally useful for understanding the concrete historical circumstances that have induced lower-class groups to reject the existing sociopolitical arrangements. Just as the category "working class" is too broad and undifferentiated to serve as a useful heuristic device, so too is the term "consciousness." In order to be effective, it must be broken down into a number of more or less distinct


categories, such as craft consciousness, class consciousness, and revolutionary consciousness.47

A belief in the irreconcilability of class interests does not, in itself, represent a commitment to revolutionary change. It has often been the case that workers have come to view their interests as ultimately opposed to those of the "capitalists" or employers while at the same time continuing to accept, or at least, tolerate the existing arrangements. Nevertheless, it is considered that a belief in the irreconcilable nature of class antagonisms represents an important stage in the development of workers' consciousness.

Revolutionary consciousness among workers must be distinguished from the foregoing categories because neither an awareness of class identity nor a belief in the irreconcilability of class interests necessarily involves a commitment to the fundamental restructuring of society and the state. What distinguishes revolutionary consciousness, therefore, is the conviction that grievances can be redressed only by a transformation of the existing institutions and arrangements by the establishment of an alternative form of social and political organisation. How then do workers arrive at such a rejection of the prevailing arrangements and how do they develop an alternative vision? These issues are often conflated, but from an analytical point of view they represent distinct, if interrelated, problems. It is conventional in the literature to draw a distinction between two basic approaches to these issues: theories that focus primarily on revolutionising circumstances external to the workers themselves and their milieu, and those that locate the roots

47 In this study, the term "class consciousness" will be used descriptively to denote the awareness of belonging to a broad social collectivity which is different from, and often perceived to be antagonistic towards, other social groups.
of rebellion in the workers' own experiences acquired at the workplace, in the community, or in society.

Theories relating to external factors share a common assumption that workers cannot develop revolutionary consciousness on their own. To become revolutionary, workers require outside help in the form of a political party or the intervention of radical intellectuals. Lenin exemplifies this perspective, but similar conclusions can also be found in the work of Selig Perlman, writing in the late 1940s, and Barrington Moore some thirty years later.48 However, their theories offer different explanations of the conditions that make workers receptive to revolutionary ideas imparted to them by non-workers. According to Lenin, class struggles provide the precondition whereas Perlman considers that state policy is responsible. Moore believes that the explanation lies in the violation of the social contract that exists between workers and superordinate authorities. Theories relating to internal factors, by contrast, argue that workers are revolutionised by their own experiences, without the intervention of an outside agency. Marx was an exponent of this theory, as was Trotsky, but the approach is hardly confined to the Marxist tradition. Some scholars, such as Rienhard Bendix and Seymour Martin Lipset, emphasise the revolutionising effect of workers' exclusion from society and the polity.49 In a different version of this argument, Charles Tilly focusses on the impact of workers' new "proactive" claims for power in the polity and the consequences that ensue when these claims are not

met. Neil Smelser and Chalmers Johnson assert that massive structural changes in a society deprive workers of their traditional values and dispose them toward revolutionary ideas and movements. Ted Robert Gurr stresses the social psychological consequences of frustrated expectations that result when workers anticipate greater progress than is actually achieved.

As the foregoing suggests, a dual classification of the literature in terms of external factors on the one hand, and internal considerations on the other, actually conceals a variety of explanatory models that try to account for the circumstances that dispose workers to embrace revolutionary solutions to labour problems.

One explanatory model, originating in Marx, emphasises the role of the workplace in shaping workers' consciousness and organisations. For Marx, two features of the workplace in a capitalist society were decisively important: the elaborate division and the high concentration of labour. Marx offers two important propositions. Firstly, he states that the large-scale enterprise with an elaborate division of labour will provide the locus for labour organisation and political radicalism. Secondly, he asserts that workers have a capacity to acquire an alternative (revolutionary) vision of society from their experiences of the workplace and class and political struggles. The first of these propositions has become axiomatic in Soviet scholarship. Workers employed in large-scale, technologically advanced enterprises are reputed to have provided the social basis both for


labour organisations and for the revolutionary workers' movement led by the Bolshevik party.

In contrast to Marx, Mancur Olson argues that small-scale work environments, rather than large ones, are the most conducive to collective association.\(^5\) Other scholars have noted that isolated and even dispersed workers sometimes display a high level of organisation and militance.\(^4\) A growing body of literature demonstrates that Western European artisans in small unmechanised workshops in the nineteenth century were among the first to initiate trade unions and to embrace socialist and revolutionary ideologies.\(^5\) From these and other studies, we find that workers in a small workplace environment with a limited division of labour have shown a high propensity for labour activism and political radicalism in certain contexts.

Research linking consciousness to experiences at the point of production has shown the importance of investigating aspects of the workplace other than size and the division of labour.\(^5\) The stratification of workers in an enterprise, social relations, hierarchies of authority and control, shop traditions and customs, as well as


changes in any of these areas or in the labour process, may influence the way workers think and act.

Another theory centres not on the workplace per se, but on the characteristics of the workers employed there. Attention is directed towards their origins, background, life history, and attributes such as skills, literacy, level of urbanisation, gender, and so on. Trotsky relies on this type of explanatory model, which connects consciousness and activism to specific characteristics of the workers themselves.

Trotsky argues that peasants who were "snatched from the plough and hurled straight into the factory furnace" were disposed to develop revolutionary consciousness. These workers, he asserted, were "without any artisanal past, without craft traditions or prejudices." In his view, it was from the deracinated peasant population, bereft of common corporate traditions, that Russia's revolutionary proletariat emerged.

This line of argument has much in common with a Durkheimian approach which also stresses the radicalising effects of disorientation produced by sudden discontinuities and rapid social changes. Smelser sums up this idea when he asserts that the "theoretical and empirical evidence suggests that social movements appeal most to those who have been dislodged from old social ties by differentiation but who have not been integrated into the new social order."58

58 Neil J. Smelser, "Toward a Theory of Modernization," in Social Change: Sources, Patterns, and Consequences, ed. Eva Etzioni-Halevy and Amitai Etzioni, 2nd ed. Basic Books, New York: 1973, p.281. By contrast, Barrington Moore (in Social Origins of Dictatorship and Democracy but not in Injustice) and Theda Skocpol downplay the importance of social movements in revolution, focussing on variables such as elite coalitions, the breakdown of the state, and the impact of international relations. They do not deny that social forces become mobilised during revolution; Moore stresses the peasantry and Skocpol both the workers and the peasants. Their highly structural approaches, however, lead them to de-emphasise the independent impact
A modified version of this approach can be found in Leopold Haimson's essay "The Problem of Social Stability in Urban Russia, 1905-1917." Haimson draws a connection between the mounting revolutionary disposition of workers on the eve of the First World War and the influx into the factories of young workers who were disorientated and lacked the traditions and sobering experience that had been acquired by older, more seasoned workers in the aftermath of the 1905 revolution.59

Tilly, a consistent critic of the Durkheimian approach, reaches quite different conclusions about the attributes of the Western European workers in the nineteenth century who formed collective organisations and adopted radical ideas. Rapid social change, Tilly writes,

withdrew discontented men from communities in which they had already had the means for collective action and placed them in communities where they had neither the collective identity nor the means necessary to strike together....It took considerable time and effort both for the individual migrant to assimilate to the large city, and thus to join the political strivings of his fellows, and for new forms of organization for collective action to grow up in the cities.60

Thus, two quite different arguments can be found in the literature concerning the characteristics, both demographic and otherwise, of radical workers. One emphasises their uprootedness, uncertain identity, and lack of common traditions while the other

stresses their long-term urban roots, collective identity, and pre-established bases of collective action.

Yet another model, closely associated with Leninist theory but by no means confined to it, emphasises the role of an outside agency, in the form of a political party or intellectuals, in shaping the ideology and collective activities of workers. Whereas Marx expected workers to acquire revolutionary consciousness as a result of their own experiences, Lenin advocated the use of a vanguard party, composed of dedicated professional revolutionaries, as the instrument for implanting revolutionary consciousness in the minds of workers. Perlman's *Theory of the Labor Movement* also proceeds from the assumption that workers will not develop a radical transformative outlook if left to their own devices. He emphasises the historical role played by intellectuals in the labour movement in diverting workers from their natural inclination for gradualism and incremental material improvement to the politics of revolutionary change.61

In his study *Injustice*, Moore argues that revolutionary ideas, especially those comprising a socialist vision of the future, must reach workers through the intervention of an outside agency. Like Lenin, he believes that workers are unlikely to move on their own beyond industry-specific demands to develop a comprehensive radical critique of society.62 In so far as workers have a vision of a better society, it is likely to be backward-looking, or a version of the present stripped of its most painful features.63

If an outside agency was, indeed, responsible for implanting revolutionary concepts among Russian workers, then we still must

63 ibid., pp.208-216, 476.
explain the appeal of drastic and far-reaching solutions to labour problems.

In *Injustice*, Moore presents a social contract theory to explain the "social bases of obedience and revolt" among workers in Germany from 1848 to the Nazi era. He contends that social contracts, subject to continual testing and renegotiation, exist at all levels of society between dominant and subordinate groups. They exist not only between rulers and subjects, but also between employers and workers.64 Workers derive their standards of justice and condemnation from pre-existing mutual expectations and obligations, particularly, though not exclusively, from the workplace. Violations of these reciprocal relations by superordinate authorities provide an important cause of moral outrage among workers.

For such outrage to develop into a basic critique or rejection of the status quo, something else must take place. Specifically, Moore notes three circumstances: workers must learn to identify the human causes of suffering as distinct from an inevitable order of things; their escape to traditional forms of security must be blocked; and their reliance on paternalistic authority must be transcended.65 Even then, no certainty exists that workers will develop revolutionary ideas on their own or will embrace such ideas when they are imparted by radical parties and groups. In his view, "some precipitating incident in the form of a new, sudden, and intolerable outrage" must occur

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64 ibid., pp.18, 19, 23, 202-203.
65 ibid., p.125. Moore's argument that workers must learn to identify the human causes of suffering as distinct from an inevitable order of things bears close resemblance to Marx's view that workers need to comprehend that power issues not from the gods or from nature but from "man himself." Marx, *Economic and Philosophical Manuscripts*, p.79.
before moral indignation is likely to find expression in a revolutionary movement.66

In his analysis of the French Revolution, Alexis de Tocqueville, well known nineteenth century French politician and political writer, also places great importance on the violation of expectations in generating lower class rebellion. Tocqueville's argument contains the crucial idea that people become enraged when their expectations are first heightened and then disappointed.67

A linkage between frustrated expectations and workers' rebelliousness also underlies integration theories. However, unlike the explanatory models based on the idea of a social contract, integration theories emphasise the frustrations that workers experience when they are excluded from the dominant institutions.

Integration theories, as put forward by Bendix, Lipset, and others,68 are based on the assumption that workers will acquire a stake in the prevailing system to the extent that they can achieve tangible


67 Other influential historians of France have vehemently rejected class analysis. Richard Cobb has flatly rejected any sociological abstractions or quantitative study that effaces from historical narratives the record of individual lives. In his massive two-volume interpretation of France since 1848, the Oxford historian Theodore Zeldin has insisted that individuals are the proper subjects for the historian and that individuals are so complex that no single theory will explain their behaviour. Having abandoned class analysis and all general theories, he suggests that historians adopt his method of pointillisme, a metaphor for impressionistic depiction of societies through tiny individual dots of colour. Some Marxist scholars have also been critical of past uses of class analysis. The English historian E.P. Thompson has denied that class is purely, or even primarily, an economic category; it is, instead, a living relationship created through acts of will and shared historical experience. Thus, in Thompson's view, it would be possible for a group of workers to bear a common relationship to the means of production without constituting a class. The existence of a class presupposes deep cultural ties, even a common Weltanschauung. Thompson's empirical Marxism has tended to corrode the orthodox Marxian assumption that class is a relatively straightforward phenomenon, apprehensible in economic terms.

improvements through an exercise of their rights to participate in society and the polity. From this perspective, state policies and actions, and more generally, the "flexibility and rigidity with which the dominant groups...were prepared to meet the challenge from below,"69 are accorded a decisive influence over the political direction of workers in transitional societies.

Soviet studies in the Russian labour field, particularly those published after the 1920s, generally apply a narrow definition of the working class, virtually equating it with factory workers. Adhering to Marxist-Leninist assumptions concerning the progressive historical role of the "proletariat," Soviet scholars have concentrated on workers employed in factories to the exclusion of most other groups within the urban labour force.70

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Such a highly circumscribed definition of the working class does not take into account workers in sectors of the urban economy other than manufacturing, or even all of the workers in the manufacturing sector. To exclude artisans from the working class is to ignore one half of the printers and binders in St. Petersburg, more than two-fifths of the Moscow metalworkers, and nearly all of the workers in the St. Petersburg and Moscow apparel trades who represented the second largest aggregate group in the manufacturing sector of each city.

Some recent Soviet and Western studies have attempted to expand the definition of the Russian working class to include all workers in the manufacturing sector as well as those employed in construction. This approach provides a more comprehensive picture of the working class but workers in other sectors of the urban economy are still excluded.

The composition of the working class, for the purposes of this study, includes a multiplicity of groups in manufacturing, sales-clerical, construction, textile, metalworking, transportation, communication, and service occupations who belonged to the hired labour force and were engaged in manual or low-level white-collar

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72 One of the social historian's most difficult problems is how to divide complicated societies into groups large enough to facilitate the study of social relations, yet not so large as to preclude meaningful generalisations about individuals. Many Marxist and non-Marxist historians have accepted social classes as the appropriate units of analysis for these purposes. Orthodox Marxists continue to believe that an individual's public identity is best understood as a function of his or her relationship to the means of production, and that the historical progress of a society is best understood as the result of class antagonisms. Many non-Marxists are disposed to employ the categories of class analysis as useful, indeed, indispensable labels in their work, even when they reject class struggle as the motive force in history. For these historians, class is a heuristic device that enables a scholar to impose order on an otherwise chaotic social universe.
jobs. By virtue of their statements and actions, all of these groups can 
be construed as part of a larger social collectivity that contemporaries 
called the rabochii klass (working class). The definition of the 
working class used in this work takes into account, therefore, both 
characteristics of this group and the common experiences that 
induced highly diverse segments of the St. Petersburg, Moscow and 
Tula labour forces to "feel and articulate the identity of their interests 
as between themselves, and as against other men whose interests 
[were] different from (and usually opposed to) theirs."73

The Russian workers' world was determined by a variety of 
factors ranging from the traditions of the city in which they lived, 
conditions in their places of work, their levels of skills and of literacy, 
to political circumstances within the Russian Empire as a whole. 
What emerges from the still sketchy picture of that world is that 
many workers had a surprisingly large capacity to grasp the 
possibilities within particular situations and to reach out to one 
another, organise, and take action to protect interests or to work for 
new goals. Workers were still generally desperately poor, often 
ignorant, superstitious, confused, and limited in their understanding 
and in their aspirations, but time and time again, in varying 
circumstances and for different reasons, they achieved a degree of

73 E.P. Thompson, The Making of the English Working Class Victor Gollancz, London: 
1964, p.9. Historians have not been rigorous in defining the category of class as 
applied to workers. On the one hand, they have referred to the working class as a 
unitary sociopolitical formation, as a single "urban class" or as a social group 
characterised by its "downtrodden essence." On the other hand, these scholars have 
shown a certain awareness of the social, economic, and political differentiation of 
workers. What is lacking in the scholarly literature is a close analysis of the extent 
of this differentiation and a systematic inquiry into whether it can be reconciled with 
the notion of class. Moreover, there is, as yet, no agreement among scholars about the 
relationship between Russian workers, the tsarist state, and factory owners. Did the 
factory owners wield political power? Was the state an independent force 
emancipated from, and standing above, a more or less helpless society?
class consciousness and played a substantial role in the working out of their own destinies.

Taken together, the works of recent scholars provide a much more detailed and nuanced picture of the working class in Russia between 1880 and 1917 than existed previously. The portrait we see, unfinished though it may be, encourages us to view the Russian worker as a unique phenomenon. The strong ties with the countryside that many workers preserved is one aspect of that uniqueness. There are examples of the same kind of connection in Western Europe, particularly in France, but Russia would appear to stand apart in terms of the extent to which its working class was rooted in the peasantry. Another aspect of that quality of uniqueness is the extent to which Russian workers experienced the process of "telescoping development" or "combined development."

A third unique element of the Russian workers' situation stems from the fact that the Russian working class came of age in a period in which sophisticated political and economic analyses of their situation existed in the forms of Marxism and what came to be known later as Marxism-Leninism. There were also the examples of powerful socialist parties and trade union movements in the West. Finally, in Russia itself, there was a ferment of discussion on political and social questions and currents of disaffection among the various components of its society.

Yet, while it would be impossible to ignore the uniqueness of the situation of the Russian working class as it developed and matured between 1880 and 1917, an important dimension is added to the discussion by recognising the extent to which the Russian working class followed patterns familiar from studies of workers in Western Europe. Russian workers, like their counterparts in Western
Europe, made good use of the communities of one kind or another that existed. Peasants coming into the urban work force for the first time often could rely on help from members of a zemliak (person from same district). Skilled workers enjoyed the pride and sense of solidarity that mastery of a craft and admittance into its fellowship conferred. Artisans in Russia lacked the rich guild tradition that played such an important role in Western Europe, particularly in Britain and France, but they were, however, drawn together by a common craft, by the environments created by the small workshops they worked in, and often, by the harsh conditions in which they had to live and work. Even unskilled workers in large factories could learn something from the skilled craftsmen who worked among them, setting up and repairing the machinery, as well as something from the way factories were sometimes organised as a series of workshops, and from feelings of identification with fellow workers in a factory or with the inhabitants of a largely working class district. There was also a surprisingly rich associational life, informal groups to look after the shop icon, mutual aid societies, workers’ clubs and libraries, trade unions, workers’ political circles and other political units.

Much remains to be done. We need more studies of groups of workers, more studies of workers outside St. Petersburg and Moscow, more studies in particular on the popular culture of the working

What we know of a group's material and cultural life helps us to understand its political situation more fully, just as a study of political activities can provide a greater awareness of a group's customs, values, and aspirations. In the case of the Russian working class, politics is an unavoidable topic of interest. Recent scholarship has done much to enhance the possibilities for a comprehensive understanding of politics broadly defined under the last tsar. It provides another and exceedingly rich historiographical layer of material for the examination of this period. At the same time, it furnishes a point of departure for further work along lines already being pursued by historians of the American, British, and French working classes using the techniques of social and urban history.

This study will apply the theories of working class formation to a Russian regional case. The focus - Tula - was chosen for study not just because of its significance as an industrial centre but because of the many conditions and problems which it shared with other central Russian towns. Like its neighbours, Tula was an old centre of the metalworking industry. It drew most of its workers from within its own boundaries as well as from surrounding provinces (guberniia) and most of them were, at least nominally, peasants. In other words, they were legally members of the peasant estate (sosloviie). By nationality, almost all of Tula's workers were Great Russians, and most were members of the Orthodox faith. In these respects, Tula resembled the other provinces of the Central Industrial Region, namely, Vladimir, Jaroslav, Tver, Nizhnii-Novgorod, Kostroma, Moscow, and Kaluga. Many of the same features of ethnic and

75 Some publications that have began to fill these needs in addition to works already cited are, Henry Reichmann, *Railwaymen and Revolution: Russia*, 1905 University of California Press, Berkeley: 1987; and Jeffrey Brooks, *When Russia Learned to Read: Literacy and Popular Literature, 1861-1917* Princeton, NJ.: 1985.
The years 1880-1900 merit attention as a watershed in the industrial and social development of both Tula and Russia. In these years, large scale mechanised factories came to play a predominant role in industrial production. Strikes and related forms of protest grew from a slow trickle in the early 1880s to a great wave in the late 1890s. Revolutionary circles and the government both showed an increased interest in the industrial working class. This was manifested in propaganda and agitation on the part of the former, and intensive legislative activity on the part of the latter.

This study will go no further than the year 1900, at which point several new variables entered the picture. One was the Russian government’s short-lived experiment in police socialism, the Zubatovshchina. Another was the world-wide industrial depression which began to affect Russia in 1900. A third was the emergence of a Marxist party whose members were committed to, in principle if not in practice, a much greater measure of coordination and centralised leadership than their forebears of the 1890s. The interaction of these factors raises questions of a different order from those which will concern us in the 1890s, and will warrant a separate detailed study.

The subject matter of this study is concerned with living and working conditions of workers in Tula in the last decades of the nineteenth century. It will attempt to describe these conditions, to explain their historical significance, to use them to illuminate the Russian workers’ view of the world and their capacity to act together. The broader questions which lie behind this thesis concern the social
aspects of industrialisation and the driving forces of the Russian Revolution and a recurring theme is the movement of peasants into factory work.

Other questions raised revolve around everyday life in industrial Tula, such as how workers perceived their surroundings, how their lives were changing under the conditions of industrial employment, and what features of their existence might have promoted or retarded their capacity for collective action. In addition, by analysing conditions and actions in the period between 1880 and 1900, it is hoped that a few rays of light may be cast on the far more serious conditions, actions and outcomes of later years, most particularly 1905 and 1917.

The study will deal with two important themes. The first theme concerns the world of the worker, both in the workplace and outside it. That world was one of extraordinary diversity, varying according to whether the worker was skilled or not, newly arrived from the countryside or accustomed to the ways of the city, male or female, and so on. The second theme, which deals with the

76 During 1990-1991, while on my five month research trip to the Soviet Union, I had the opportunity to spend several weeks in Tula. According to local archival officials, I was the first Westerner to ever work in their archives. Unfortunately, my visit was somewhat ill-timed as the archives, which were housed in five separate buildings, were being renovated, and as such, access to delo was limited. Otherwise, access to any retrievable material I requested was unhindered and readily made available. In my opinion this demonstrates the suitability of regional studies of this nature. Furthermore, access to previously "closed locations" is progressively being lifted, an example being Stephen Kotkin who has worked in the Magnitogorsk archives, "Magnetic mountain. City building and city life in the Soviet Union in the 1930s. A study of Magnitogorsk," Ph.D. Dissertation, University of California: 1988. Without question, the opportunity to visit Tula, to work in its archives, to talk to local archivists, to walk its streets, to see the city of the day when studying its past was an enormously enriching experience and this study has benefited immensely from it. The feasibility of a study without the availability of the Tula archives, however, needs to be emphasised. All important published materials are available in Moscow and Leningrad libraries. The chief archival materials and newspapers are also located in these two cities. Nevertheless research such as this is inevitably handicapped by lacunae in available sources.
development of class consciousness, cuts across social and political history. There are some paradoxes here in that at times unskilled workers appeared to be more class conscious than skilled workers. Certainly different groups experienced different rates of development. Often, workers were unable to build and capitalise on foundations laid earlier.

Earlier in this chapter the investigation initially focussed on the historiography of the Russian working class, its historians and theories of social change. Later in the study a regional and city profile is presented, which highlights the role played by foreign entrepreneurs in Tula's early industrial development. Secondly, an investigation is undertaken of the Tula workers themselves, what their background and motivations were, and what journey, both physical and emotional, brought them to Tula. Thirdly, the social and economic ramifications of living in Tula are explored and material is presented on family life, on marriage, on patterns of residence and household composition and on the question of an hereditary proletariat. Fourthly, Tula workers' capacity for collective action is explored through a discussion of cooperatives and mutual aid societies, the frequency or absence of strike action and how the former and the latter influenced Tula workers' capacity for joint action and class consciousness. The study concludes with a summary of the issues canvassed, in terms of an examination of the interaction between the forces of innovation and tradition, of continuity and discontinuity, in Russian society.

It is the intention of this study to provide an additional understanding of how the Russian workers saw both themselves and their relationship to society as a whole, and to further clarify the role of the working class in the breakdown of tsarism. This work also aims
to add substantially to the historiography of the working class and the revolution in Russia. Finally, by first examining and interpreting the ordinary details of urban working class life experienced throughout the Russian Empire, it is hoped that the awesome importance of the Russian Revolution will become more fully understood.
Chapter 2

Economic Profile of Tula to 1880
The aim of this chapter is, firstly, to provide a general overview of industrial Tula to the end of the nineteenth century and to trace Tula’s capitalist development and the state of class relationships in that society. Secondly, an attempt is made to demonstrate the importance and the resilience of the artisanry during and after the seventeenth century in Tula and how its industries predominantly were centred in the iron manufacturing area. Thirdly, the discussion endeavours to show that for much of the nineteenth century the number and importance of small-scale manufacturing establishments outweighed large ones, and main centres of production were located outside the city. Russian industry developed in a peasant milieu, and industrial or semi-industrial labour was to become an accepted part of the peasant way of life. Fourthly, it is argued that serfdom was the main barrier to extensive capitalist development not only in Tula, but throughout the whole of Russia.

The chapter then seeks to highlight the role played by foreign entrepreneurs in Russia’s economic development and in Tula in particular, and how during the sixteenth and seventeenth centuries the state was most useful as an agent of industrial development especially when it backed private entrepreneurs with extensive charter rights, generous subsidies, and loans, and all but guaranteed markets and profits.

Next, the emergence of new class relationships in Tula is noted. As one class appeared which was investing capital in new factory equipment, another class was forming which was forced to seek work with the capitalist-entrepreneur. This latter class was composed of former peasants and artisans whose traditional economic activities and life patterns had been made obsolete by technological developments.
In conclusion it is argued that at the turn of the twentieth century, Tula was experiencing industrial growth which was occurring at a rapid rate, and which was accompanied by diversification of output, mechanisation, and concentration of production in large enterprises, but that despite these important innovations, however, most of Tula’s industries did not spring up in a void, but rather evolved from the industries and traditions of an earlier era. This element of historical continuity leads us into the next chapter which explores the origins of Tula’s labour supply.

Tula is first mentioned in the Chronicles in 1146. It was initially part of the Riazan Principality before falling under the control of the Muscovite state in 1503. Its strategic location and proximity to Moscow meant Tula subsequently was to play a pivotal role in battles for control of Muscovite Russia. At the end of the sixteenth century, Tula and Serpukhov were the main strategic

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2 Tula experienced numerous incursions and raids by Tartars in 1517, 1530, 1541, 1552, 1568, 1571-72, 1591-92, 1613-1615, 1618-1620, 1633 and 1659. In order to repel these invasions various city fortifications were built. In 1509, on the left bank of the Upa river a wooden fortress was constructed. Several years later in 1521 a stone citadel was built and towards the end of the sixteenth century a fortified perimeter was constructed.
outposts for Moscow's frontier forces. As a consequence Tula experienced a number of incursions and sieges. Significantly, in 1552, Crimean khan Devlet-Girei surrounded the city with 30,000 troops yet the city did not fall. Some fifty years later in 1607 Tula withstood a three and a half month siege by peasant bondmen and Cossack rebels led by I.I. Bolotnikov. In 1637, there were some 3,120 soldiers stationed in Tula and although two years later this number had decreased to some 2,499 troops, it still remained a significant force. Coincidentally, an "armaments" industry gradually developed in and around Tula. The industry's prosperity was greatly enhanced by the abundance and close proximity of the raw materials that were essential to any metallurgical endeavours. The surrounding area provided iron ore in shallow seams, high quality clay, large forests to supply timber for construction and charcoal for production, and a navigable river capable of supplying water from which a water wheel could be powered. Tula's proximity to Moscow meant that finished products could readily reach the capital.

The history of skilled artisans working in armaments manufacture can be traced back to the early part of the sixteenth century when Moscow masters such as Bulgak Novgorodov (1513), Ignatei (1542), Stepan Petrov, Bogdan, and Andrei Chokhov amongst others were casting cannon; the first reference to ironsmiths in Tula itself dates to the end of the sixteenth century. The city of Tula and its environs became one of the earliest industrial areas of Russia, when

4 G.M.Belotserkovskii, Tula i Tulskii uezd v xvi i xvii vekakh Kiev: 1914 p.21.
in the first half of the seventeenth century the first blast furnace factory in Russia was established in the region. From this inception, Tula was to remain for the next hundred years the centre of the metallurgical industry for the Russian government. In the early eighteenth century, a state armaments factory was built in Tula, one of the largest enterprises of its kind in Russia before 1917.

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\text{(footnote)}
\]
Closely aligned with the development of a metal industry in the Tula district were "handicraft" industries, which also have a long history, dating back to the fifteenth century. They experienced a particularly rapid development in the middle of the seventeenth century. Historical writings of the sixteenth century reveal that in Tula between 1587 and 1589 there were 218 artisans of whom sixty were occupied in food processing, forty in the manufacture of leather goods, twenty-two in clothing manufacture, twenty in iron manufacture, twenty-one were carpenters, thirteen bricklayers, and two iron-smiths. Of these 218 artisans listed in the cadastre books for Tula for this period, only five are registered as peasants. Of the 262 artisans listed for 1625, only one is listed as a peasant, an interesting anomaly given the weak development of urban crafts in Russia at the time. Tradespeople in 1625 numbered ninety-two, that is forty-four per cent of all artisans. During the 1620s Tula numbered thirty-eight registered iron artisans, comparable figures for other Russian towns are as follows: Kholmogory sixty-three, Nizhnyi-Novgorod forty-nine, Pavlovo-Nizhegorodsoe eleven, Solikamsk sixteen, Kaluga forty-four, Vologda, forty-nine, and Totma ten. Tula gunsmiths had been recruited to state enterprises from the sixteenth century by the Musketeer Bureau (Streletskii Prikaz). As V.I. Lenin noted in his work: "They formed a separate smith's suburb, constituted a separate

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7 A written document (pravdia gramota) of Peter I dated 13 July 1696 records the settlement of thirty iron-smiths in Tula in 1595.
8 Cadastre - an official register showing details of ownership, boundaries, and value of real property by districts, made for taxation purposes.
10 See the Glossary at the end of the thesis for a more detailed explanation of this and other unfamiliar Russian terms.
social estate, enjoying special rights and privileges." In 1595, Tsar Fedor Ivanovich ordered thirty of the most skilled artisans, known as gunsmiths (*samopalnye kuznetsy*), to resettle in Tula on state land in a special suburb (*sloboda*). He freed them from the town tax burden and from labour obligations, in return for which they were to devote themselves exclusively to arms production for the state. In the course of the next several decades, they were also exempted from billeting obligations and from taxation, and were placed under the *Streletskii Prikaz* in Moscow. Thus from the beginning the state took seriously the manufacture of armaments. Tsarist "written documents" (*gramoty*) regarding Tula gunsmiths in 1619, 1622, and 1641 defined the character of this social class with a special legal status (*sosloviia*). Tsarist *gramoty* of 1678, 1680 and 1681 further encouraged Tula's metal industry by locating ironsmiths in the armaments industry to live and work in Tula.

During the Regency of Sophia (1682-1689), 194 gunsmiths annually manufactured 2,000 harquebus. During the reign of Peter I in 1704, in the ironsmiths' *sloboda* in Tula there were some 300 ascribed serfs and 749 gunsmiths, producing some 8,000 flint-lock rifles for Moscow.

The table below depicts the growth of the Tula gunsmith masters over a period of one hundred and thirty years, from the end of the sixteenth century to the first quarter of the eighteenth century.

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11 Lenin "The Development of Capitalism in Russia," p.424. An order in 1707 relating to state blacksmiths proposed to create a list of all blacksmiths and regulate their movements. This order required blacksmiths to obtain permission and to sign a register or "notebook" before they could leave or absent themselves. Bakulev, *Tulskia promyshlennost*, p.27; and N.E. Brandenburg, *Materialy dlia istoriit artilleriiskogo upravleniia v Rossii* St. Petersburg: 1876, pp.436-443.


13 Portable gun supported on a tripod by a hook or on a forked rest.

illustrating an initial steady growth, a doubling between 1626 and 1640, then an escalation at the turn of the eighteen century followed by a further dramatic expansion. The latter increases can be attributed to the establishment of several arms manufacturing enterprises, the largest being the state armaments factory.

Table 2-1: Tula gunsmith masters 1590-1720 and number of rifles produced.

<table>
<thead>
<tr>
<th>Year</th>
<th>Masters</th>
<th>Year</th>
<th>Rifles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1587-89</td>
<td>28</td>
<td>1660</td>
<td>224</td>
</tr>
<tr>
<td>1595</td>
<td>30</td>
<td>1665</td>
<td>2000</td>
</tr>
<tr>
<td>1616</td>
<td>35</td>
<td>1701</td>
<td>8000</td>
</tr>
<tr>
<td>1626</td>
<td>48</td>
<td>1703</td>
<td>15000</td>
</tr>
<tr>
<td>1635</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1640</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1663</td>
<td>117</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1670</td>
<td>103</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1677</td>
<td>108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1695</td>
<td>196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1707</td>
<td>749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1720</td>
<td>1161</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Ukaz. vyshe gramoty 1632, 1665 gg.; Gamel, Opisanie Tulsogo oruzheinogo zavoda, p.33; Pistsovye knigi XVII., St. Petersburg: 1877, pp.1084, 1085ff; Pravaia gramota 1696, Nakaz 1707, dannyi staroste tulskikh kazennykh kuznetsov Mosolovu; Brandenburg, Materialy dlia istorii artilleriiskogo, p.436; Belotserkovskii, Tula i Tulskii uezd, p.21; and I. Gamel, Opisanie Tulsogo oruzheinogo zavoda, pp.43,53.

The sixteenth century saw Russian cities and towns undergo a rapid commercial expansion. The consequence of industrial prosperity was the growth of a non-artisan population and thriving towns with shops and stalls. While Moscow remained the dominant commercial centre, Tula on a smaller scale exemplifies the expanding Russian economy. Around the mid-1500s in Tula there were located 218 shops (seventy-two sold meat, thirty-one salt, ten copper goods, ten fish, four butter, four malt, the remainder selling various
domestic produce and utensils), but by 1598 to 1599 city documents listed 280 shops plus 130 stalls. Nonetheless, Tula remained a garrison town. Of Tula's total population of 1,198 people in 1631, forty-three per cent comprised military personnel, and thirty-eight per cent were artisans.

A basic feature of Russian economic development in the sixteenth century was the importance of money in agriculture. As a result of the growth of domestic commerce, landlords came to prefer obrok in cash to obrok in kind, and this forced a significant number of peasants into economic activities from which they could obtain money.

The growth of commerce on towns had an impact on the countryside. In an economy previously dominated by natural exchange, money began to assume significance. Even more numerous and important than the urban artisans to the development of Russian industry at this stage, were the rural craftsmen or kustari. Many of these worked independently and sold their wares in markets and fairs, but a rapidly growing number worked up material supplied by merchants who bought the finished goods at a low price and marketed them themselves. The merchants had recourse to this method of expanding their capital and increasing their business because of the nobles' monopoly of serf labour and the great shortage of wage labour.

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16 Belotserkovskii, Tula i Tulskii uezd, p.13. In Moscow in 1638 there were 2,367 artisans, in Kolomna 159 (twenty-two per cent of the adult population), in Mozhaisk 224 (forty per cent), in Serpukhov 331, in Kazan 318 (more than fifty per cent), in Novgorod about 2,000, and in Nizhni Novgorod about 500.
A number of rural districts acquired fame in one or other branch of industry or handicraft. The village of Khovy, near Vladimir made a name for icon making, Penza district was well known for woollen carpets, Gomel for glassware and linen, Ivanovo-Voznesensk for linen and cotton printing and Tula district for its hardware, cutlery and curiosities.\footnote{17}

In the period from 1627 to 1678 the number of peasant households in the Tula uezd increased from 1,697 to 3,561, that is, more than two-fold. It was during this period of population growth that handicraft production of iron began to predominate. Osip Gamel in a study of this industry in Tula noted that those engaged in the industry lived in close proximity, or within the environs of Tula.\footnote{18} Table 2-2 lists some of the principal metalworking industries in the Moscow-Tula region.

**Table 2-2: Principal metalworking industries in the Moscow-Tula region in the seventeenth century**

<table>
<thead>
<tr>
<th>Date of establishment</th>
<th>Position</th>
<th>Production, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1632</td>
<td>Ten miles from Tula</td>
<td>Mortars, cannon, grenades</td>
</tr>
<tr>
<td>17th century</td>
<td>Near Kashira on the Oka</td>
<td>Mortars, cannon, grenades</td>
</tr>
<tr>
<td>17th century</td>
<td>Ugodsk on the Nara</td>
<td>Bar and roofing iron, anchors</td>
</tr>
<tr>
<td>17th century</td>
<td>Pavlovsk works, west of Moscow</td>
<td>Firearms, locks, miscellaneous</td>
</tr>
<tr>
<td>1696</td>
<td>Near Tula</td>
<td>&quot;Twenty thousand muskets, ten thousand pairs of pistols annually, besides other iron goods.&quot;</td>
</tr>
<tr>
<td>1707</td>
<td>Pushech, at Moscow Lipetsk, between Kozlov and Voronezh</td>
<td>Cannon and &quot;all sorts of arms for the supply of the Tsar's army.&quot;</td>
</tr>
</tbody>
</table>

\footnote{18} I. Gamel, *Opisanie Tulskogo oruzheinogo zavoda v istoricheskom i technicheskom otnoshenii* Moscow: 1826, p.3.
Besides these and other large works, there were about fifty small artisan workshops in the Tula district in 1725.19

Foreign entrepreneurs and industrialisation in Tula in the sixteenth and seventeenth centuries

This study contends that we should view the “transition from feudalism to capitalism” in Russia during the sixteenth and seventeenth centuries predominantly in terms of such internal economic dynamics as the differentiation and separation of agriculture and artisanry; the specialisation of artisan-masters within individual handicrafts (presaging a “division of labour” in later industry), with successful artisans and wholesale merchants gaining the capital of less successful masters and even hiring them as wage-workers; the general expansion of a money economy and a pronounced tendency for cash obrok to be preferred to obrok in kind; and that these factors do not represent so much the substance of an emerging capitalist system as its background or prelude. It was the manufactory20 which represented the real emergence of the

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20 Capitalism in this study refers to a society characterised by a definite relationship between technological capacity and social structure, a society which follows in time the dominance of the artisan workshop and is based upon new sources of power and methods of labour organisation. This new technology first found expression in the “manufactory,” a large-scale commodity-producing enterprise of the early capitalist period. The manufactory was different from artisan production in its use of power gained from water falling from the sluice of a dam onto a water wheel, the drive-shafts of which fed the energy thus captured into the machinery of an industrial enterprise. This power was so much greater than that which could be exercised by an individual artisan that it made possible an enormous expansion in the size of tools and machinery and necessitated a certain concentration of both capital and workers, for the equipment was expensive and demanded a number of workers to operate it as
tremendous productive powers of capitalism together with industrial capital for the production of commodities on a new and expanded scale. And here we perceive a striking difference between the history of capitalism in Russia and that of Western Europe. In the West the manufactory was an indigenous development, but in Russia it was introduced by foreign merchants who resided in the country and were always alert to the possibility of tapping increased profits through new economic activities. In Russia the transition from simple artisan production to the more advanced production of the capitalistic manufactory came not as a consequence of the "ripening" of capitalist tendencies in artisanry, transport, fishing, and so on, but rather as a result of the failure of a semi-medieval economy to move independently and with sufficient speed toward advanced technology on a capitalist basis. To put it simply, the Russian government turned to foreign merchants for the construction of manufactories during the sixteenth and seventeenth centuries because pressing industrial demands (created above all by military needs) were not being met by existing productive forces. In this sense, therefore, manufacturing represented an "external force" which interacted during these centuries with those internal dynamics of the Russian economy which were described earlier.

well as a rudimentary but very real "division of labour." See Marc Bloch, "The Advent and Triumph of the Water Wheel," in Land and Work in Medieval Europe Routledge and Kegan Paul, London: 1967, p.137; S. Lilley, Men, Machines and History: The Story of Tools and Machines in Relation to Social Progress Lawrence and Wishart, London: 1965, pp.46,78; and Paul Mantoux, The Industrial Revolution in the Eighteenth Century Jonathan Cape, London: 1961, p.25. The manufactory system which took shape in Western Europe after the fourteenth century was as striking an advance over the earlier form of artisan production as, in its turn, the factory system of the eighteenth century (based first on steam and then on electricity) was an improvement over the manufactory. For reasons of literary convenience "factory" and "manufactory" are used interchangeably in this study.

21 Muscovy's seventeenth century wars were largely devoted to restoring the territorial losses sustained during the Time of Troubles. Conflicts during this period involved Sweden, Poland, the Cossacks and Stenka Razin's uprising from 1667 to 1671.
Specifically, foreign entrepreneurs (and some Russians) in the sixteenth and seventeenth centuries built no fewer than fifty-seven manufactories in the Empire: twenty-eight iron works, two copper mills, five gunpowder factories, six paper plants, three glassworks, three sawmills, three rope works, three textile factories, a tannery, and three silk shops. The following discussion on state-entrepreneur relations, factory production, and labour practice will centre upon the original four iron manufactories established by Andrei Vinius in Tula.22

22 Peter Marselis and Filimon Akema who subsequently became partners of Vinius expanded their iron manufacturing activities from the initial four factories, most significantly in 1653, with the construction of four new iron factories located in Kashirskii uezd, about forty kilometres to the north and slightly to the west of the Tula group. The upper factory, called the Vedmenskii works, was on the Skniga, near its point of confluence with the Solomenka. The factory produced musket and carbine barrels, nails, ploughshares, handmills, and, when required, halberds (combined spear and battle-axe), spades, small axes, picks, hoes, and shovels. The second manufactory was located near the village of Salamykova, also on the Skinga river and was known as the Salamykovskii works. The forging shop located in this factory producing iron plates for armour and doors. The third and largest factory in the Kashira group was the Chentsovskii enterprise, built on the Skniga river at the town of Chentsova. This factory like its counterparts was a complex of buildings, each performing a particular function. First, there was a forge with two hammers, where the iron strips for musket and carbine and steel swords were made. In a second building masters converted the iron strips into gun barrels; in a third shop the barrels were bored and polished with two "spits" (drills). The second structure was especially large and contained four large furnaces equipped with bellows, served by four masters. There were three smaller furnaces for making nails and small iron objects, parts of the gun barrels, and various tools used by the masters. A section of the building was used for finishing the firearm barrels. Opposite this large building were six interconnected huts (izbi) with six furnaces for the manufacture of armour. Finally, the Chentsovskii factory was provided with a fuel shed, three storage barns, and several izbi used as homes for the masters. The fourth factory, the Elkinskii, was also on the Skniga river. There was a forge shop here with two large furnaces and a "large hammer." The same enterprise had two other forges, as well as a barn with eight drills for musket barrels powered by a single water wheel. The Kashira enterprises were forging and boring shops; they had no furnace for smelting pig iron. Before the construction of the Vepreiskii factory in the same area in 1668, they obtained pig iron solely from the second Tula works, refined the product at their forges, and then made the commodities described above. After 1668, the Vepreiskii factory also shipped pig iron to the Kashirskie enterprises.

Marselis and Akema acquired two other iron factories during the 1650s, both of which were situated in the Tula-Kashira area, approximately one hundred kilometres southwest of Moscow. The first of these, the Porotovskii works (so named from its location on the Porotva river), was in Maloiaroslavskii uezd. The second enterprise in this area was built by Marselis and Akema in 1659 on the Ugodka river, four verts northeast of the Porotovskii works. The Porotovskii and Ugodskii factories were
On 29 February 1632 Dutch merchant Andrei Vinius and two partners, his brother, Abraham, and fellow merchant Julius Willeken, received a charter granting them permission to build Russia's first important water-powered iron manufactories. Tula and its environs offered a suitable location for iron manufactories because of abundant forest and ore supplies, as well as such materials for iron smelting as limestone, and sand. Tula also had the advantage of being close to Moscow and linked to it by an excellent water route beginning with the Upa river, leading to the Oka, and thence to Moscow via the Moskva. Rivulets and streams in the area provided water power for factory machinery. Initially, these enterprises were to be located near Tula, on three rivers, the Voshana, Skniga, and Vorona. However, Vinius finally decided to build his four factories on the Bolshaia Tulitsa river, a fortunate location since the Tulitsa, flowing through mountainous terrain, had a significant “fall” at this point, and its high banks made it a convenient place upon which to build factory dams. In this period an “iron enterprise” was not the huge and unified structure of later years, but rather a group of workshops smaller than the Tula and Kashirskie enterprises. In 1662, the Porotovskii was equipped with seven water wheels, a double-blast furnace, and a forge shop with five hearths and two large hammers. At the same time the Ugodskii enterprise functioned with two water wheels and two forge shops containing three large hearths and two hammers. Apparently it obtained its pig iron from the Porotovskii furnace and was probably built in order to provide the Porotovskii manufactoiy with more forges and thus maximise total output. The Ugodskii and Porotovskii factories had the obligation during the 1660s to deliver fifteen thousand puds of iron to the state each year. Their commodities consisted of cannon, projectiles, grenades, cannister shot, floor plates, and angle-iron. Arquebuses (an early type of portable gun, supported on a tripod by a hook or on a forked rest), swords, armour, and spiked helments were also made at times. The tsar ascribed Vyshegorodskiaa volost in Vereiskii uezd (consisting of 170 households) to Akema and Marselis to provide unskilled labour for the Porotovskii and Ugodskii enterprises. Krepostnaia manufaktura v Rossi, vol. 1, pp.31-33, 35-39, 95, 213, 215-217, 277-278; Gamel, Opisanie Tulskogo oruzheinogo zavoda, pp.20-22; Stoskova, Pervye metallurgicheskie p.89; and Baklanov et al, Tulskie, pp.15-16, 31.

23 Bakulev, Tul'kaia promyshlennost, p.18; Belotserkovskii, Tula i tul'skii uezd, pp.9, 11; and S.M. Stoskova, Pervye metallurgicheskie zavody Rossii Moscow: 1962, p.20.
separated by the need for each stage of the operation (blasting, forging, boring, etc.) to have its own water wheel. On the other hand, these workshops were unified by the role each played in terms of the others in the production process as a whole. The four factories were spread along the Tulitsa river, the nearest twelve kilometres from Tula, the farthest, fifteen kilometres, near the hamlet of Slobodka-Gorodishche.

The main blast furnace was located at the second workshop, a similar furnace in the third factory being used only in emergencies. The second and third enterprises had annexes where specialists made cannon and projectile molds and all but the third were provided with shops where cannon were bored, polished, and finished. The first factory had a hammer shop, the fourth no less than three. Although less information is available concerning the activities of the third Tula works (and it probably passed through periods of idleness), it appears that weapons were manufactured there as well.

The factories were to operate tax free for the ten-year duration of the charter. The foreigners were "to make freely cannon and projectiles... and plank iron and various sorts of rod-iron and all types of iron work...." The tsar granted exemption from trade duties (poshлина) and promised to order such quantities of the factory's

24 A factory which smelted pig iron from ore with a blast furnace was known in Russian as the domennyi zavod; enterprises which refined that product into a higher-quality iron were called zhelezodelatel'nye or zhelezooobrabatuyushchye zavody. In this thesis the more generic term "iron factory" embraces both types of iron enterprises.
25 The first of the four dams and factories was near the hamlet of Slobodka-Gorodishche; the second dam was four hundred sazhens (about 2,800 feet) further down the Tulitsa; the third workshop was three hundred sazhens from the second dam and located at Torkhov, quite near Tula. The first manufactory was fifteen kilometres from Tula, the fourth twelve kilometres from the same city. Gamel, Opisanie Tulskogo oruzheinogo zavoda, pp.8-13; and Stoskova, Pervye metallurgicheskie pp.20-21.
26 Gamel, Opisanie Tulskogo oruzheinogo zavoda, pp.10-11; and Stoskova, Pervye metallurgicheskie pp.80, 88-89; Baklanov et al, Tulskie, p.83.
output as were needed by the state at twenty-three altyn, two dengi per pud for cannon, twenty-six altyn, four dengi per pud for plank iron, and thirteen altyn, two dengi for rod-iron and cannon balls. After four years, however, if the prices of these commodities on the open market were less than the prices stated above, the factory owners were to make deliveries to the state at market prices "with such reduction as is possible" (s ubavkoiu kak mochno). The factory complex was completed in 1637.

The division of labour amongst metalworkers due to technological advances was evident as early as the latter half of the seventeenth century. The production of iron was divided into twenty specialised tasks, the manufacture of cannon into eighteen, the manufacture or production of ammunition for rifles into nineteen, and the manufacture of side-arms into twenty. In a typical Tula iron manufactory in the seventeenth century one team of masters was responsible for the operation and fuelling of the blast furnace; another group was occupied at the forge, producing iron from pig iron; and others made swords and firearm barrels, laboured in the boring shops, or assembled the wooden and metal parts of the rifles into finished products. In fact, there were no fewer than thirty areas of expertise among the masters and submasters of the Tula works.

27 Gamel, Opisanie Tulskogo oruzheinogo zavoda, pp. 1-4 (documents).
28 Krepostnaia manufaktura v Rossi v.1, Tulskie kashirskie zheleznye zavody Leningrad: 1930. The first two volumes of which are especially valuable, for they contain extensive descriptions of the iron factories of the Tula-Kashira area compiled by government inspectors between 1647 and 1690, documents concerning the entrepreneurs, their privileges and relations with the government, and information relative to the output of the iron enterprises, its marketing and prices, and data on the workers and peasants of the manufactories.
29 From factory inventories of 1647, 1662-1664, and 1690 we have a list of some of the foreign workers (70 masters and 38 submasters) engaged at Tula. Twenty-two masters and 20 submasters were employed in the hammering shops. Eight masters and 7 submasters were occupied at the blast furnace as smelters (plavilshchiki) or cannon-casters (pushechniki), the two tasks being similar. Twelve masters and 4 submasters were called sovmestitiy, literally "pluralists," that is, men employed in two or more
Although this separation and allotment of function represented a genuine advance over peasant artisan practice and was one factor in the achievement of a higher rate of labour productivity, production had by no means yet attained the disciplined and continuous quality of the modern-day "assembly line," characterised as it is by the intensive application of both consecutive and simultaneous operations. At various times the same master usually engaged in totally different operations, so that a particular craftsman from the blasting shop might follow the product of his labour into the hammering shop, or even participate in the finishing of arms, cauldrons, and door plates.30

From the outset, Russia imported or enticed skilled masters and submasters from abroad. At least thirty-three foreigners arrived at Tula between February 1636 and February 1641. On February 9, 1642 Andrei Vinius petitioned the tsar to admit into Russia still more foreign masters for work in Tula. Peter Marselis31 also served the

specialties. The remaining foreigners were smiths (kuznetsy) of various types: iron-sheet makers (doshchatniki), barrel-borers (stvolnye zavorshchiki), cuirassiers (latniki), nail-makers, lock-makers, sword-makers, cannon muzzle polishers (vertelshchiki), and polishers (tochilshchiki). See Krepostnaia manufaktura v Rossii, vol. 1, pp.8-21 and passim. Also N.B. Baklanov, V.V. Mavrodin, and I.I. Smirnov, Tulskie i kashirshie zavody v xvii v. Moscow-Leningrad: 1934, pp.67-68.

30 For example, a team of a master and two assistants who could produce two cannon in 24 hours, would also clean three or four cannon and bore the detonators in that same time period. Here we observe not only high productivity but also flexibility in the division of labour sufficient to permit the same men to be occupied at such radically different tasks. Krepostnaia manufaktura v Rossii, vol. 1, pp.24-25.

31 Peter Marselis and Thomas de Swaen joined the original group of investors in the very first year of their undertaking in 1632. Andrei Vinius' brother, Abraham is no longer mentioned in connection with the iron works after 1637. Thomas de Swaen was no longer a partner in the Tula works after 1638. Julius Willeken also withdrew from the partnership at an early date, possibly due to involvement with other business ventures. In 1636, Willeken received a charter for the resin (smola) trade at Archangel and was active there at least until 1644.

This breakup in the original group of investors led Vinius to seek partners in addition to Peter Marselis so that sufficient capital could be raised to insure early completion of the Tula iron factories. It was probably at this time that Boris Morozov, a great Russian boyar-merchant and a statesman close to the young heir to the throne, Aleksei Mikhailovich, was taken into the partnership, this being the first known case of a Russian participating as a silent partner in a foreign business undertaking. In the
factory in this respect, helping to obtain at least four Swedish iron masters in 1640 and 1641 alone. Christian Schimler, Marselis' secretary, used visits to Sweden in 1643 and 1645 to engage needed masters for the factory.Personnel records of the factory indicate that the largest number of foreigners at Tula in this period were Walloons, masters from the southern, French-speaking part of the Netherlands. There were also a number of Swedes and a few Germans. Foreign workers and their dependants were brought from abroad at the expense of their employers, and because such specialists were scarce even in Western Europe at this time and could command a high price at home, they were paid excellent wages. In some cases, masters were unable to exercise their acquired skills at Vinius' factory, this being due in some instances to recruiting masters with skills to which the necessary tools and machinery had not been purchased or infrastructure had not been constructed. It was, therefore, unusual for a master to remain at Tula for very long. Indeed, it was not uncommon for a master to leave before expiration of his prearranged work period. Only in later years were Marselis and

late 1630s Thielemann Lus Akkema also became a partner, and in 1639 a new charter was obtained to reflect these changes in the ownership of the Tula works. E. Amburger, Die Familie Marselis, Studien zur russischen Wirtschaftsgeschichte, Giessen: 1957, pp.98, 100; Gamel, Opisanie, p.12; and Stoskova, Pervye metallurgicheskie, pp.21-22.

32 A.S. Muliukin, Ocherki po istorii iuridicheskago polozheniia inostrannykh kuptsov v Moskovskom gosudarstve Odessa: 1912, p.92; and E. Amburger, Die Familie Marselis, p.104.

33 In 1647, the highest wages were paid to smelting master, Christian Wilde, who received 150 roubles per year. Other specialists were paid less, according to the established differentials of the seventeenth century. The cannon and projectile master Andreian Kerkoven and his brother, Fatden, each received one hundred roubles per year; Pieter Fillison, an apprentice, was given fifty roubles. While copper money was in circulation in Russia, foreigners too were paid in that coin, which could be exchanged for precious metal at the time of departure for home. Real wages for all masters and apprentices were significantly increased by free housing plus daily korm (feeding) allowances of several altyn. Krepostnaia manufaktura v Rossii, vol. 1, xxvii, pp.12-13, 24, 31.

34 One also suspects that life in Russia may have been idealised by factory recruiters abroad, and that a harsher reality caused some foreigners to become dissatisfied.
Akema able to create a solid core of workers, many of whom became Russian citizens and never returned home.\textsuperscript{35}

The tsarist government wanted Russians to learn thoroughly all aspects of modern metallurgy, and the obligation to instruct Russians and conceal nothing from them was written into the original factory charter granted to Vinius in 1632. As we shall see, however, both the foreign capitalists and their non-Russian workers sought to evade this obligation in every possible way, and thus maintain their indispensability to the Russian state. During the first two decades of iron manufacturing in the Tula factories, Russian submasters and apprentices were the students and understudies of these foreigners and were unable to participate in skilled work without them.\textsuperscript{36}

We do not have much information on the life of a skilled worker at the Tula enterprises during the seventeenth century. From the material available, we might conclude that masters and submasters, both Russian and foreign, were paid enough in wages and maintenance (that is, food, housing etcetera), to ensure a satisfactory standard of living for the times. Skilled workers and their apprentices lived in special izby (cottages, huts) at the factory, the degree of comfort of a particular worker’s accommodations depending upon the value attached to his work in the factory.\textsuperscript{37}

\textsuperscript{35} A.M. Pankratova, 	extit{Formirovanie proletariata v Rossii (xvii-xviii v.v.)} Moscow: 1963, pp.227-228; I. Gamel, 	extit{Opisanie Tulskogo oruzheinogo zavoda}, pp.1-4; Baklanov, et al., 	extit{Tul'skie i kashirshie zavody}, p.71; and 	extit{Krepostnaia manufaktura v Rossii}, vol. 1, xxvii.

\textsuperscript{36} Pankratova, 	extit{Formirovanie proletariata}, pp.227-228; Gamel, 	extit{Opisanie Tulskogo oruzheinogo zavoda}, pp.1-4; Baklanov, et al., 	extit{Tul'skie i kashirshie zavody}, p.71; and 	extit{Krepostnaia manufaktura v Rossii}, vol. 1, xxvii.

\textsuperscript{37} Speaking of iron factories in the Urals during the following century, one historian noted that "...the usual work day for those employed full time ran for eleven hours in winter and thirteen hours in summer. Night work was exceptional, except in the smelter, where two shifts were used to keep the furnaces in continuous operation...." (J. Blum, \textit{Lord and Peasant in Russia, from the Ninth to the Nineteenth Century}}
Had Vinius so desired, he could have recruited a labour force devoted to the menial and less skilled aspects of factory work as voluntary wage-workers. But it was more profitable for him to utilise serf labour, as was the current practice by capitalists of the period, to gain control over a number of workers who could then be exploited in a less restricted and conditional manner. In 1638, Vinius was granted, in answer to his petition of that year, the nearby royal Solomenskaia volost, which had 250 households and 347 men. The peasants of Solomenskaia volost traditionally paid the tsar 470 roubles annually in obrok (quit-rent). After 1638, this was paid to the factory owners, who delivered to the tsar equivalent value "in bread and military equipment."38

The peasants worked for the foreign entrepreneurs on the basis of "agreement documents" (dogovorny e zapisi) the provisions of which were more advantageous to the foreigners. Every year the peasants were to supply nine hundred sazhens of fuel wood for the factory for charcoal making, bring three thousand carts of ore from the mines at Dedilov to the factory during the winter ("because during the summer it is impossible to bring ore over the steppe"), carry pig iron from the blast furnace at the second factory to the various hammershops, cut wood for factory constructions and repair needs, and load barges on the Oka and Moskva with finished commodities. Each peasant was to present himself at the factory to serve for the duration of every sixth week. The work schedule was arranged so that half of the available peasants for a given week came

Princeton University Press, Princeton: 1961, p.311). In view of the rather static technology of this period, it seems likely that this statement also applies to Russian iron manufactories of the seventeenth century. I have discovered no evidence that women or children were used in any aspect of metalworking at Tula or in any other manufactory during the seventeenth century.

Pankratova, Formirovanie proletariat, p.228.
with their horses (these men were paid from three to four and a half kopecks per day), while the other half of the labour force - those without horses - owed a week and a half of service (and were paid from two to three kopecks per day).\footnote{S.G. Strumilin, \textit{Istoriia chernoi metallurgii v SSSR} vol. 1, feodalnyi period (1500-1860g.g.) Moscow: 1954, pp.113-114; and l.V. Chekan, "Tulskie i kashirskie zheleznye zavody xvii veka," in \textit{Ocherki po istorii torgovli i promyshlennosti v Rossii v 17 i v nachale 18 stoletiia} Moscow: 1928, p.158.}

The ascription of the peasants of Solomenskaia volost to the Tula works was important for the profitable operation of the enterprise as a whole. The Soviet economist S.G. Strumilin estimated that such labour on the free market would have cost the capitalists 627 roubles annually, but Vinius paid less than a quarter of this amount thanks to the compulsory conditions under which his unskilled men worked. The peasants involved in these obligations found the situation both unprofitable and disruptive of their normal pursuits.\footnote{There are some cases of Solomenskaia peasants working as assistants or even submasters within the factories, in the production process. This work was more highly paid and not so onerous or burdensome. \textit{Krepostnaia manufaktura v Rossi}, vol. 1, pp.31, 37, 122.} A small number responded in the manner so characteristic of the oppressed in Russia during this time: they ran away. Available documents of the period indicate that in 1647, five households and nineteen male inhabitants in Solomenskaia volost, fled from the "many exactions of the foreigners." Of those who remained there were 276 households and 469 male inhabitants.\footnote{Strumilin, \textit{Istoriia chernoi metallurgii}, pp.113, 115; and \textit{Krepostnaia manufaktura v Rossi}, vol. 1, pp.1-8.}

Miners also played a role in the life of the Tula manufactories. Vinius obtained iron ore from a site forty kilometres south of the Tula works and ten kilometres southwest of the town of Dedilov. Ore was mined there in the winter from the first of December to the first of March, because the heavy loads could be brought to the factory only...
by sleigh. The ore in this area was of low quality, from swamp deposits, in shallow beds from three to seven feet deep and from forty-two to ninety-four feet wide. The miners (rudokopy) came from the Cossacks communities and regiments (streltsy) of Dedilovskii uezd, (the former compulsory serf and the latter ascribed labour), who were ordered by the tsar to provide a work force of fifty men. These workers were divided into five groups of equal size, each group having a foreman and working in "shifts". As part of their feudal obligations to the tsar, each of these teams had to provide one hundred carts of ore without pay. Another 1,750 carts were to be provided by "other free people at a free price." In addition to obtaining the ore, the miners also performed the first stage of ore cleaning (obogashchenie), which involved separating the ore from stones and debris.42 Although mining had been a well developed industry in Germany, Hungary, and other parts of Europe for two centuries or more, the technical knowledge gained from such experience was not implemented in Tula. When one ore site at Dedilov was exhausted or flooded with water, no attempt was made at deeper or more extensive exploitation; rather, the miners simply moved on to a new location.43

B.B. Kafengauz noted that working conditions at the mines were so disagreeable that "wage payment and agreement were combined with duty and compulsion." At times, the miners petitioned the tsar to supplement their numbers with other recruits. The pay was so poor and irregular that disputes developed. In

42 Stoskova, Pervye metallurgicheskie, p.63.
December 1669, thirty-seven miners refused to go to work because of delayed wage payment and overwork. They were punished with the knout and returned to their jobs by force. But it was impossible to expect these men to be enthusiastic in their mining endeavours, considering that it was not only compulsory but seasonal and secondary to their regular pursuits. Difficulty was also caused by the fact that the local governor (voevoda) did not hesitate to move the miners to some other area of work as the need arose, causing a delay in factory work until a petition to the tsar from the factory owners would bring the men back to the pits. For example, a petition submitted on 9 December 1668 tells us that voevoda Skryptsyn of Dedilov took fifty miners working for Akema and Marselis from their pits and sent them to the voevoda of nearby Bogoroditskoe to assist in bread-making. Five years later a similiar problem arose for Marselis when the voevoda of Dedilov sent the fifty miners of the iron factories (along with 380 other people) to Voronezh for shipbuilding. A petition of 31 January 1674 brought the men back to digging ore.

One of the strongest indications of the importance attached by the Russian government to the development of manufacturing is the extent to which royal legislation consistently defended the economic interests of factory owners against all who caused them difficulty, whether ascribed peasants, local officials, or uncooperative provincial nobles.

Royal serfs ascribed to Tula iron works found their work difficult and unpleasant and their pay low, and by the early 1670s

their dissatisfactions began to show. On 3 September 1672 the Marselis family submitted a petition to the tsar stating that the dam of the Vedmenskii factory had been damaged, and that when the peasants of Solomenskaia volost were summoned to fulfil their obligations and repair it, the "old insurgents" (buntovshchiki) "Larka Osipov of Alekseevaia village and Vaska Titov, nicknamed the mutt [kobel], of Bogatkovaia village and Ivashka Mikheev of Zolotikha village" induced the peasants not to go to work "so that our factories will be destroyed." Captain Dmitrii Bitiagovskii arrived in Solomenskaia six days later, on 9 September with orders to persuade the peasants to return to work, or failing that to mete out "cruel punishment." The peasants agreed to carry out the foreigners' instructions, but trouble soon broke out again and the peasants refused to serve the factory and even petitioned the tsar (unsuccessfully) for relief of their burdens. Thus began a stormy "strike" period in which the peasantry stopped transporting fuel and ore, the factory stood idle, and the Marselis family "suffered great losses because the masters were not [able to work] but [nevertheless] during the idle days the foreigners took money according to their contracts." Apparently this dispute lasted through the winter of 1672-1673. We also have reports of "disobedient" miners at Tula and Kashira in 1657 refusing to work until orders were reissued by the tsar.46

Skilled factory workers did not participate in the disorders at Solomenskaia volost but appear in contemporary accounts of these events only as witnesses.47 This is probably because the position of masters and even apprentices in iron manufactories was good for the time, certainly better than that of ascribed peasants. Marselis paid the

47 Baklanov, et al., Tulskie i kashirshie zavody, p.21.
supervisor of his factory three hundred roubles annually, while foreign masters received as much as 280 roubles. Even Russians inside the enterprise were free men who earned from 60 to 120 roubles a year plus free dwellings and regular bread and salt allotments and thus, these factory workers were likely to be more satisfied than ascribed serfs. Despite this, though, they did flock to join the great peasant uprising of 1667 when Stenka Razin's lieutenant Vasilii Us passed through the Tula area indicating, perhaps, that for all their benefits factory workers were still discontented.

In contrast to mining or transport work, fuel-making at Tula was carried on by wage-workers completely independent of compulsory or ascribed labour, for this was skilled work and demanded true specialists. The wood was obtained from forests bought from three different landowners, located five, seven, and fifteen versts from the factory. The charcoal was prepared in special pits six versts away, under the supervision of foreign masters, five of whom in 1647 received annual wages of ninety or one hundred roubles. Russian workers cut the wood, transported it, and tended the fires, and they were each paid wages varying from ten denga to two altyn per day.

When the Swedish traveller Kilburger visited the Pavlovskii, Porotovskii, and Tula iron factories during the 1670s, he reported that linden, aspen, and spruce were variously used as base material

49 Krepostnaia manufaktura v Rossii, vol. 1, p.xxviii.
50 Kafengauz, Istoriia khoziastva Demidovykh, pp.30-31; Strumilin, Istoriia chernoi metallurgii, p.108; Krepostnaia manufaktura v Rossii vol. 1, pp.11-13; and Gamel Opisanie Tulsogo oruzheinogo zavoda, p.10.
51 The Pavlovskii and Porotovskii enterprises were built after the Tula works.
for the charcoal, although birch was considered most desirable. At this time wood was brought by peasants from the province of Galich (over five hundred kilometres northeast of Tula) during the summer and sold to the factories in hundreds of baskets. A pile of wood measured three and a half arshins (about ninety-eight inches) and cost from eleven to fourteen kopecks.52

The life of a large iron enterprise such as the one established by Vinius also demanded a number of auxiliary masters who produced various commodities required by the factory, or who saw to the maintenance and repair of its facilities. Carpenters and sawyers, for example, were charged with tending the dams, waterwheels, and the many buildings, large and small. Special smiths forged iron objects and tools required for the machinery of the Tula works; other masters made molds and bellows. The skilled work of these men was of obvious importance for the effective functioning of the Vinius manufactory, and it must be said that most of these artisans were Russians, probably free men voluntarily selling their labour power to the factory. Their wages, by Russian standards, were high.53

The Tula iron works produced cannon in large quantities, and in 1646 the partners exported six hundred to Holland, to be followed by 360 the next year. These cannon fired four to eight funt projectiles and weighed from thirty to sixty-one puds. Projectiles from two to twelve grivni in weight were smelted in large numbers, and some were as heavy as twenty-five grivni. Grenades were usually one, one and a half, or two grivni, though larger models were not uncommon. The Tula factories manufactured angle-, rod-, and bar-iron, but sheet-
iron and wire were not often produced. A document from this period
tells us that "Andrei Vinius and his comrades did make musket and
carbine and pistol barrels and armour and spiked helmets, but they
have [now] abandoned these activities and sent [those] masters
abroad..." Since the cannon were cast directly from pig iron and not
from higher-quality forged iron, it seems that the cost to the
purchaser (at seventy kopecks per pud ) was also lower.\footnote{54}

Delivery records indicate that the Tula works were extremely
productive. In April 1641, for example, the Munitions Office
(Pushkarskii Prikaz) accepted 1,853 cannon balls from Andrei Vinius,
and in May 1641, the Grand Exchequer (Prikaz Bolshoi Kazni) bought
684 cannon balls from the factory. In 1647, the factory was producing
over five thousand puds of joint-iron per year, which demanded as
much as ten thousand puds of pig iron. Probably at least twenty
thousand puds of cannon and cannon balls were also produced
annually in the late 1840s, and Strumilin estimates the value of
25,000 puds to have been ten thousand roubles or more.\footnote{55}

Orders of this size made it possible for the factory owners,
producing goods at perhaps one-tenth the cost of artisan technology,
to reap profits which may have reached 2000 per cent. The actual cost
of the Tula works to its owners can only be estimated, but it probably
did not exceed five thousand roubles.\footnote{56} And yet Vinius was
constantly in debt during the construction of these enterprises, and
was forced at all times to operate with co-investors. This would seem
to indicate that his initial expenses were high, although the long-

\footnote{54} Krepostnaia manufakutra v Rossii , vol. 1, p.14; Gamel, Opisanie Tulsckogo
oruzeinogo zavoda, p.14; Stoskova, Pervye metallurgicheskie, p.76; and Strumilin,
Istoriia chernoi metallurgii, p.105.
\footnote{55} Strumilin, Istoriia chernoi metallurgii, p.105.
\footnote{56} Strumilin, Istoriia chernoi metallurgii, p.109.
term return of this investment seems to have been sufficient to make the ownership of these iron factories a highly desired privilege, and one which, was to be the object of fierce and ruthless competition among the partners from almost the very start of their manufacturing activity at Tula.

The partnership between Andrei Vinius, Peter Marselis and Filimon Akema in the early 1640s disintegrated into bickering and recriminations. Marselis and Akema split with Vinius and intended to build other iron factories far from Tula on the Volga, Kostroma and Sheksna rivers. On 8 June 1646 the government opened an inquiry into the dispute and government investigators visited the Tula factories to ascertain whether the original partnerships had adhered to the terms of the factory charter, and if there were any discrepancies or deviations, who was responsible for them. The inquiry concluded that the Tula factories were not producing all of the commodities desired by the government, and Russians were not being instructed in the more skilled aspects of iron manufacturing. In the wake of this incident on 30 November 1647 the government seized the Tula factories and announced its intentions to operate them as state enterprises.57

On 1 September 1648 the Tula industries reverted back to private ownership under the control of Marselis and Akema who received a new factory charter which granted them a twenty-year tax-free monopoly on iron production, again on the condition that Russian workers be trained in all production and construction techniques. In the event of the death of either partner during this

57 The date of the government's seizure assumes that factory activity began at Tula in 1637. Bakulev, Tulskaia promyshlennost, p.21; and Amburger, Die Familie Marselis, pp.106-107.
period his heirs could inherit his share of the factories. The provision to train Russian workers is an important caveat and demonstrates the government's desire to lessen its reliance on foreign expertise by having its own skilled workers.

Under state tutelage, the Tula works had been neglected and badly supervised, and no doubt the situation was exacerbated by Vinius, Marselis, and Akema withdrawing their managerial expertise as well as transferring their most skilled workers to their Vaga river enterprise. Marselis and Akema as a matter of priority repaired and re-opened an enlarged works. Between 1648 and 1662 no fewer than eight new manufactories were established in the Tula-Moscow area of the Russian Empire. Of these, one was a state enterprise, two were the property of great boyar-entrepreneurs, and no fewer than five were constructed by Marselis and Akema. As we have seen, by 1662 the state factory had closed and only one of the original "feudalist" enterprises remained in noble hands (that of Anna Ilinichna Morozova). The fact that Marselis and Akema built five of the eight factories established between 1648 and 1662, and ended up owning six of the seven of these factories still operating in 1662, shows the tendency for foreigners to gain an increasingly large share of the industrial market even in this early period. And Marselis and Akema

58 Gamel, Opisanie Tulskogo oruzeinogo zavoda, pp.16-17; Amburger, Die Familie Marselis, p.109; and Stoskova, Pervye metallurgicheskie, p.78.
59 The Vaga enterprise was located in Volodskiaia gubernia, well over 600 kilometres northeast of Moscow. As early as 1644, Vinius had been urging his partners to speed up their plans to establish a blasting factory at this location, and by the end of that year a court (dvor) for the iron works had been established on the Shelash'e river in Vazhskii uezd. Construction of the factory proceeded quickly and it began operations on 6 October 1648. In fact the partners received some government cooperation in their Vaga river project. They obtained, for example, two fuel masters from the Pyskorskii copper enterprise in Perm gubernia; the smelting master in the Vaga factory was evidently a Russian, Kiril Savelev, who had been trained at Tula by Christian Wilde. Only cannon balls were smelted at this new manufactory. Krepostnaia manufaktura v Rossii, vol. 1, pp.14, 16.
60 Strumilin, Istoriia chernoi metallurgii, p.118.
continued to operate the four other iron enterprises at Tula throughout the entire period 1648-1662, giving them a total of ten modern iron manufactories by 1662. Between the 1630s and 1674 sixteen iron manufactories were erected in Russia; these foreign entrepreneurs (Akema and Marselis) established eleven (five of these factories in partnership with Andrei Vinius), while the state built three, and the court magnates I.D. Miloslavskii and B.I. Morozov, in conjunction with foreigners, one each. By 1674, two of these manufactories had been closed (these were the state-built Iauza river enterprise of 1649-1651 and the Vaga river works of 1648), leaving fourteen still in operation. Three of these were state enterprises, while two belonged to Filimon Akema and the remaining nine were property of the Marselis family.61

Marselis's irregular dealings in illegal currency transactions led to the forfeiture of his enterprises to the tsar in June 1662. Marselis himself was to be expelled from the country.62 The state became Akema's new enterprise partner, not altogether a favourable proposition from his point of view: with the state as partner, Akema no longer had any control over factory labour policies, and foreign

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61 These were the state-owned Zvenigorodskie iron manufactories (Pavlovskii, Borodnikovskii, and Obushkovskii works); Akema's Ugodskii and Porotovskii enterprises; and Marselis' four Tula and four Kashira factories plus the Vepreiskii (Aleksinskii) manufactory jointly owned with Thomas Kellermann. The Pavlovskii and Porotovskii works were originally built by the Russian nobles Morozov and Miloslavskii respectively. The establishment of fourteen successful iron manufactories in forty years in a backward country such as Russia at this time not only was a great achievement, it was the prologue to one of the most fascinating episodes in early Russian economic history: the effort to establish modern metallurgy in a frozen, snowbound area more than one thousand kilometres north of Moscow and the Russian heart land. P.G. Liubomirov, "Rolkazennogo, dvorianskogo i kupecheskogo kapitala v stroitelstve krupnoi promyshlennost Rossii v XVII-XVIII vekakh," Istoricheskie zapiski, vol. 16 1945, pp.65-99.

62 Marselis managed to avoid expulsion and remained in Moscow after a period of intense lobbying by personal friends and relatives both within Russia and beyond its borders. He successfully, eventually, managed to regain his forfeited possessions, the tsar finally issuing an edict on 8 May 1667 restoring the Tula-Kashirskie factories to the Marselis family for a period of twenty years.
masters who refused to educate their Russian apprentices were now being hindered in their desire to return home after completion of their contracts in the Muscovite state via delays in the issuing of travel passes.63

One year after the enforced partnership between Akema and the state, he petitioned the tsar for a separation of the state from his personal interests. On 3 June 1663 an investigation was instigated, and on the basis of its findings the government agreed to a separation of interests. Akema would receive the Porotovskii and Ugodskii factories together with five thousand roubles by way of compensation and the state would retain the Tula-Kashira enterprises.64 Once again, the Tula works under state ownership and control declined, vital upkeep and maintenance was not maintained and extensive, expensive reconstruction was required.65 The Tula-Kashirskie factories were suffering from irregular timber supplies caused by deforestation of the surrounding countryside, the flight of some of the peasants of Solomenskaia volost, and exhaustion of several vital stores.66

Russian dependence on foreign entrepreneurs and foreign masters during this period is undeniable and was a necessary

63 Amburger, Die Familie Marselis, p.126.
64 The Oruzheinaia palata (the "armaments palace," an armory established early in the sixteenth century in Moscow to produce sidearms and hand firearms; it closed in the 1720s) ordered Fonvizin to inspect and examine the factories in question. Fonvizin's report on the Tula-Kashirskie factories [dated 1 September 1663 is contained in Krepostnaia manufaktura v Rossi, vol. 1, pp.40-92; his description of the Porotovskii and Ugodskii factories (dated 8 December 1663) can also be found in the same volume pp.92-186]. The results of the above investigations revealed that two of the four Tula dams had been destroyed by floods, and as of 1662-1663 some of the workshops had been standing idle for several years. The blast furnace at Tula, however, continued to operate, as did one of the forging enterprises, and these combined with the large and active Kashirskie manufactories made this complex the most serious achievement of Russian metallurgy of the time. The final decision of the government on 1 December 1663 was the exact opposite of what Akema had proposed.
prerequisite if Russia wished to build its own independent, indigenous iron manufacturing industry. The manufactories that Vinius and his partners constructed laid the foundation for the development of the Russian iron industry. Equally important, the relationship that these foreigners developed with the Russian state heavily influenced the approach that the state took when dealing with native entrepreneurs, and served as a model for government-entrepreneur relations.

Government assistance to foreign capitalists to facilitate and entice foreign workers to Russia included special loans to pay the masters, a range of benefits from wage-advances, and travel expenses to providing carts and horses for the foreigners and their families. In addition, the state provided labour to construct and assist in the operation of new manufactories and assigned state artisans on a temporary basis to assist in orders of particular concern to the government. From the 1630s to the 1690s the Russian government often ascribed villages of state peasants to nearby factories to assure these enterprises of fuel supply, transport, and so forth. According to Russian law, however, no unbaptised foreigner could actually own serfs. Therefore, peasants involved in factory work of this sort remained under the legal jurisdiction of the original owner, whether it was the tsar, or a local monastery or a nobleman who had reached an agreement with a foreigner-capitalist. Such agreements provided

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67 Russian law (as affirmed in Article 70 of the Law Code of 1649) permitted foreigners to employ the labour of people "of all different faiths." Muliukin, Ocherki po istorii turidicheskago, p.96.
68 During the 1630s, Andrei Vinius got hammers for his Tula works from the Posolskii Prikaz: [Foreign Office, (1549-1720) Chancellory which conducted diplomatic relations with foreign governments]. Krepostnâia manufaktura v Rossiì, vol. 1, p.10.
69 It is true that pomestîia (estates) with serfs owing feudal services and dues to the pomeshchik were granted to foreigners and their heirs, but this was only for the duration of satisfactory service rendered to the tsar.
for the manufacturer to assume control over a certain number of peasants and in these situations, the foreigner could claim the labour power of "his" serfs only for the duration of his factory charter.  

Almost all factory charters of the sixteenth and seventeenth centuries specified that the owners must use their foreign masters to instruct Russian apprentices in all the skills of iron manufacturing, glass-blowing, silk weaving, or other areas as appropriate. (In fact, foreigners who petitioned the tsar for permission to build a manufactory commonly held out the assurance of such training as an example of how their enterprises would strengthen the country). Russian statesmen saw clearly that the monopoly on knowledge of these ambitious foreigners made them indispensable to the technologically advanced forms of production they had created, so factory owners were able to demand high profits and force concessions such as tax and trade-duty exemptions and subsidies - all of which made capitalist development more costly for the state than it might otherwise have been. The long-term objective of the tsars was to establish factories owned by Russians and operated by Russian workers. For this reason, the foreigner, both as a capitalist and as a master, was viewed as a means by which this "industrialisation" process could be set in motion.

In some industries (rope and silk, for example) the foreign entrepreneurs seemed quite willing to educate their Russian apprentices, and even to put their enterprises entirely in the hands of native workers. However, this had, perhaps, more to do with the comparatively simple technology utilised in these industries. In most

70 Muliukin, Ocherki po istorii iuridicheskago, pp.127-145, 225-228.
71 The English preferred to use Russian workers at their sixteenth century rope works at Vologda and Kholmogory because the Russians were satisfied with lower wages.
industries this was not the case, least of all in iron manufacturing. Here, foreigners recognised the need to defend the esoteric nature of their craft lest an already precarious position be altogether lost. The high wages of Western masters and the profits of their employers dictated a mutual interest in excluding Russian apprentices from the more complex and demanding phases of the production process. The struggle for the right to control Russian manufacturing was waged between the foreign capitalist and the Russian state through the masters of the former and the apprentices of the latter.

The "rights" as set out in the factory charters should not be understood in any normal legalistic sense, for strictly speaking, no person possessed rights against the tsar. It was more of a case of reaching a mutual understanding of probable duties and privileges of an entrepreneur vis-a-vis the Russian state. In the final analysis, all authority derived from the tsar and his agreement was a necessary prerequisite for the realisation of any charter. Furthermore, unbaptised foreigners engaged in manufacturing according to Russian law of the sixteenth and seventeenth centuries had no right to own land. But foreigners could rent land according to agreement with individual nobles, and in other cases the state provided sites for the location and raw-material needs of manufactories (for example, access to forests and ore deposits; specific land grants might even be listed in factory charters). Such lands were, in effect, *pomestia*: given for the duration of factory tenure and operation. When, and if, the original connection between the manufacturer and the enterprise ceased, all the land in question unconditionally returned to the original owner.72

Another privilege of foreign manufacturers of the seventeenth century included the granting of monopoly rights by the state, initially for the whole of the Russian Empire then progressively on a regional basis. Foreign entrepreneurs sought and obtained these monopoly provisions by the state in order to eliminate competition and provide a stable environment to ensure maximum profit for the argued considerable expenditure in capital, time and labour. They bolstered their arguments by outlining the vagaries of the internal, usually state market (that is, the haphazard and inconsistent nature of government orders), the low productivity of labour and the unreliability of access to raw materials which necessitated the granting of these rights.

Commensurate with monopoly rights came the granting by the state of fiscal exemptions and relief. A standard feature of a seventeenth century Russian factory charter was provision for a period of industrial activity free of tax (obrok) and trade duty (poshlina). The length of those periods for iron manufactories ran from seven to thirty years, twenty years being more or less the average figure after the mid-century; charters for paper, cloth, silk, and glass factories usually were granted ten years of tax and duty free activity.

In addition to the above, the Russian state provided entrepreneurs with subsidies and loans. Andrei Vinius once received an annual advance of three thousand roubles for his factories at Tula and another three thousand roubles when Marselis and Akema came into the partnership, with the understanding that he would repay the government during the coming year either with factory products or

73 The factory charter obtained by Andrei Vinius in 1632 granted him and his partners a ten-year monopoly on this type of iron production for the entire Russian empire.
efimki\textsuperscript{74} gained through the export of iron commodities to Western Europe.\textsuperscript{75}

Towards the end of the seventeenth century the embryonic Russian iron industry developed even further.\textsuperscript{76} Although two of the old Tula factories were not working toward the end of this period, activity in the Tula-Kashira-Vpreia complex as a whole was pronounced, and if the Porotovskii and Zvenigorodskie enterprises closed during the 1670s and 1680s, they were replaced by enlarged iron works which operated with profit and success. In 1689, a new iron factory was built (evidently by Heinrich Butenant in the name of the Marselis family) in Aleksinskii uezd, some fifty-two kilometres northwest of Tula. These works were located on the Dugna river, on land rented from the Begichevyi pemeshchik family for sixty-five roubles and one pud of iron per year.

When Christian Marselis died in February 1690, his factories in the Tula-Moscow area immediately fell under the control of the Munitions Office (Pushkarskii Prikaz). A prikaz official made a complete description and inventory of the Tula, Kashira, and Vpreiskii enterprises, submitting the material to boyar Lev Kirilovich Naryshkin. As head of the Foreign Office (Posolskii

\textsuperscript{74} The Russian term for the German silver thaler (Joachimsthalers), large silver coins minted in Joachimsthal in Bohemia and frequently used in other European countries. In the absence of Russian silver coins of large denomination, efimki were used in Muscovy in the sixteenth and seventeenth centuries. In 1655, for a short time they became an official monetary unit called efimki s priznakami (meaning "with marks"), as they bore the Russian state emblem. S.G. Pusharev, Dictionary of Russian Historical Terms From The Eleventh Century to 1917, Yale University Press, New Haven: 1970, p.18.

\textsuperscript{75} As early as 1646-1647 the Tula works shipped 960 cannon to Dutch markets.

\textsuperscript{76} The death of the original foreign entrepreneurs heralded a new era. Andrei Vinius died in 1663, Peter Marselis his partner in 1672, and Filimon Akema, the last of the original founders of Russian iron manufacturing, in 1675.
Prikaz) and uncle of young Tsar Peter, Naryshkin gained these iron works simply by "petitioning" Peter for their ownership.77

Although the Vepreiskii enterprise and the four Kashira works were in good condition at the time, only two of the Tula factories were working by 1690.78 Yet the report of that year suggests that considerable production was achieved at the seven manufactories which were in operation. Seventy-two workers were then employed in the seven enterprises, mostly in the hammer shops and at the forges. There were also a number of doctors, tailors, administrators, and other supporting workers. Of the fifty-four foreign masters and submasters, there were Frenchmen, Swedes, Germans, Saxons, Dutchmen, one Irishman, a Pole with his son, and others listed simply as "foreigners" without specification of nationality. Russian wage-workers were excluded from the items "granted" boyar Naryshkin, indicating the "free" nature of such labour.79

Having used his influence at court to obtain ownership of the iron factories of the Tula, Kashira, and Vepreiskii area, Naryshkin

78 Specifically, only the second and fourth enterprises at Tula were really functioning, and even at the second works both the main blast furnace and its spare were idle. The seven functioning iron manufactories including the following equipment: two blast furnaces, eight hammer shops (with nine hammers in use and as many in reserve), fourteen hearths, and thirty waterwheels to operate the bellows, hammers, and hearths. These blast furnaces had an annual combined output of 50,000 puds (about 900 tons) of pig iron, from which the masters could derive 33,000 puds of quality iron. In 1690 ore was still obtained from Dedilov. *Krepostnaia manufaktura v Rossii* vol. 2: *Olonetskie mednye i zheleznye zavody* Leningrad: 1931, pp.111-138; Strumilin, *Istoriia chernoi metallurgii*, p.126; Kafengauz, *Istoriia khoziastva Demidovykh*, pp.25, 31; Chekan, "Tulskie i kashirskie zheleznye zavody xvii veka," p.154; and Baklanov, et al., *Tulskie i kashirskie zavody*, p.102.
79 Some of Naryshkin's iron factories were situated on the land of local pomeshchiki and monasteries, and he, as their new owner, assumed the annual payments in money and kind which previous entrepreneurs had rendered for use of this land. The Bolotov family, for example, received for the Elkinskii manufactory "...thirty roubles and iron and all sorts of iron products at fifteen puds per year." The Vepreiskii works was on the property of the Cheliuskintins, who received compensation of "...twenty-two roubles in money, and fifteen puds of salt, and six ploughs (soshniki) with blades, and six axes per year." Chekan, "Tulskie i kashirskie zheleznye zavody xvii veka," pp.149-150; and Stoskova, *Pervye metallurgicheskie*, map between pp.20-21.
then sought to obtain other advantages to ensure profitable operation of his industrial interests. On 29 January 1692 he secured a royal ukaz instructing all army regiments to buy their iron solely from his enterprise. Furthermore, according to this decree, iron materials for all stone prikaz buildings, regimental warehouses, and the like, were to be obtained only from Naryshkin. Although the government once paid iron entrepreneurs at a rate lower than prevailing price levels, Naryshkin was to receive "actual trade price," payment being in the iron coin then in circulation. Naryshkin ran his eight iron manufactories (including the Dugnenskii iron works, which he received in 1690) together with his sons Aleksandr and Ivan. All these enterprises were almost certainly still in existence in 1720, eventually coming under the control of Count A.I. Shuvalov. Naryshkin's iron factories seem to have closed sometime in the mid-eighteenth century.  

The only foreigner to build an iron works during the 1690s was Evert Isbrants, called Elizar Izbrant by the Russians. During this decade he established a blasting factory on the Vora river, thirty verst northwest of Moscow. Little information is available concerning this enterprise, but according to B.B. Kafengauz, it was "so famous that masters and government officials were sent there to study the factory's specifications and operation and calculate the productivity ratios." In 1698, Izbrants had a gun-powder manufactory in this same area. 

In 1693, a large new iron factory was built in Romanovskii uezd on the Belyi Kolodets, a tributary of the Voronezh river, about

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80 Stoskova, Pervye metallurgicheskie, pp.29-31.
280 kilometres south of Tula, by Nikita Grigorevich Aristov, who was a merchant of the gostinaia sotnia, and K. Borin, who was a cloth merchant of the sukonnaia sotnia, a Secretary (diak) in the State Treasury (Kazennyi Prikaz), and the Grand Exchequer (Prikaz Bolshoi Kazny), and who later worked in the Office of ore-smelting affairs (Prikaz Rudokopnykh Del). This factory was equipped with a blast furnace and other workshops. The output of the Aristov-Borin enterprise was large for the time: in 1704, for example, no less than 256 cannon were smelted at the Romanovskii works. In 1720, this factory went to the state.

Another Russian commoner to enter the iron industry during this period was Nikita Demidov (1656-1725), not a merchant but a state peasant and artisan-gunsmitr of Tula. He was to found an industrial empire in the Urals and become the greatest Russian capitalist to exist prior to the nineteenth century. By 1697, Demidov had finished his first iron factory, a large enterprise located on the Tulitsa river, just south of Tula. Demidov established this factory with his own resources, without government help. In 1700, he presented six of his cannon to the tsar, at which point Peter took a liking to Demidov and began to help him in his industrial ambitions. In 1707, Nikita Demidov built another metallurgical factory on the river Tulitsa. In fact, Demidov constructed three iron

82 In Moscow, the wealthiest group of merchants was called Gosti, next in line were the gostinaia sotnia and the sukonnaia sotnia (clothiers).
83 Liubomirov, Ocherki po istorii Russkoi promyshlennosti, p.517; Stoskova, Pervye metallurgicheskie, pp.57-58; and Strumilin, Istoriia chernoi metallurgii, p.119.
84 Jerome Blum draws the following picture of Demidov: He was a skilful manager, a shrewd and ruthless businessman, and the employer of thousands. He was fully aware of his great power and was knowledgeable in the ways of holding his sovereign's favour. Yet Nikita lived near his forges in a small wooden house (a stone house was a sign of affluence in Russia), never learned to read or write, never drank - in this he was spectacularly unlike the usual peasant - and refused to take the honours and decorations offered him by the tsar until five years before his death, when he finally accepted a patent nobility. Blum, Lord and Peasant, p.300.
works in the Tula district during the reign of Peter I (Tulskii, Aleksinskii, and Verkhne-Tulitskii). Demidov's Tula factories were operated after his death by his heirs, and finally closed in 1754.85

Other indigenous Russian entrepreneurs operating in or around Tula during this period, most of whom were previously gunsmiths, were Maksim Mosolov, Ivan Mosolov, Ivan Batashev, and Nikita Orekhov. Ivan Batashev built a factory on the Tulitsa in 1716 and Maksim Mosolov, a state smith (like Batashev), in 1728, built a factory in Tarusskom uezd on the river Mysheg. The above enterprises were worked by state smiths as these Russian entrepreneurs had no rights according to their sosloviia to possess serfs.

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Industrial development from Peter I to Emancipation

Tula declined as a centre of iron manufacturing during the first half of the eighteenth century, as did the Moscow region generally. This phenomenon was due to several factors: the poor quality of iron ore due to the high level of impurities, the depletion of forests and the consequent lack of fuel to fire the blast furnaces, the run down state of the factories and the competition of industry in the Urals and Siberia.86

Despite its decline in this period, Tula saw several new blasting furnaces and new iron works emerge and it continued to produce arms, instruments, locks, and samovars out of imported steel. On 15 February 1712 Peter I decreed that an armaments factory be built at Tula and that rifles be produced from Siberian steel.87

86 Bakulev, Tulskaia promyshlennost, p.25.
In the beginning of 1714, the building of the armaments factory was completed under the supervision of gunsmith masters Mark Vasilev, Sergei Shalashnikov and Iakov Batashchev; four years later the construction of an "armaments yard" (dvoria) was completed.

Under a decree from Peter I, Beliaev in 1705 constructed in Tula on the banks of the Upa river a state "armaments yard" with fifty forges to manufacture firearms. However, after two years the "yard" was damaged by fire and the armament workers returned to domestic handicraft production. In 1711, stolnik Chulkov


88 Semenov, Geografichesko - Statisticheskii Slovar, p.241. Artisan iron works posed such a fire hazard to Russian towns of the sixteenth and seventeenth centuries that iron masters lived and worked in posady (suburbs) just outside urban areas.
constructed another "armaments yard" which merged in March 1712 with the state armaments factory then under construction. Some 1,160 armament workers were employed by this factory in 1720 producing 15,000 flint-lock rifles.

On 17 February 1720 the final decree was issued transferring all gunsmiths to work in the state armaments factory. The existing accommodation was inadequate for some of the 1,161 masters and their apprentices. The gunsmiths themselves were reluctant to swap their present handicraft conditions for the daily grind and regimentation of factory life. So the pattern of a mixture of domestic and factory production continued, with only approximately a third of the work force actually engaged at the armaments factory.

The state armaments factory in Tula gradually declined due to governmental neglect. The factory was totally rebuilt during the years 1782-1786 under Catherine the Great, and received even further extensive modifications in 1812-1814. Construction of a new factory began in 1835 following a fire the preceding year, taking some eight years to complete. The mechanisation or the utilisation of "modern technology" was first brought to the Tula armaments factory when a steam engine was ordered from St. Petersburg in 1810 and installed in 1815.90

In 1864, prior to the handing over of the factory to a private lease, 10,000 males were employed and of these only 1,276 (state bound)91 were located at the factory, while 2,362 were involved in

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88 Russian courtier inferior in rank to boyar.
91 On 17 May, 1864 Tula state bound armament workers were emancipated from compulsory labour.
handicraft production. This division of labour was a characteristic feature of Tula's armaments industry from its inception at the beginning of the eighteenth century to the first half of the nineteenth century.

In the mid-eighteenth century the average armaments worker (tied to the state) was paid fourteen roubles forty-seven kopecks per year. By contrast, a volnonaemnyi (a civilian employed in or for the military establishment - that is, a worker not tied to the state) received wages one and a half times more than this. This unbound labour can be traced back as early as 1625, when we find in the cadastres mention of twenty-two skilled masters, of whom seventeen were ironsmiths. Also, as discussed above, in the seventeenth century specialised workers were imported from other countries. According to one Soviet source of the 193 skilled masters employed in the Tula-Kashira works at the end of the seventeenth century, ninety-four were foreigners.

Despite the downturn, traditional areas of production operations continued. The manufacture of samovars in Russia was from its very beginning centred in Tula, the first known workshop being opened in the city in 1778 by Ivan Lisitsin. By 1910, there were fifty-four factories in the town and two nearby. Between them, the factories employed 2,111 full-time workers. The number of peasant domestic handicraft workers was approximately 3,000.

92 The remainder of the work force was "free". I. Kulisher, Ocherki istorii russkoj promyshlennosti Petrograd: 1922, p.138; and Bakulev, Tulskaja promyshlennost, p.34.
93 Bakulev, Tulskaja promyshlennost, p.35.
94 Baklanov, et al., Tul'skie i kashirs'chie zavody, p.160.
95 Nauka i Zhizn, no. 4 1967, p.94.
97 Bakulev, Tulskaja promyshlennost, p.61.
By the end of the nineteenth century the industry encompassed several large factories in Tula. At this time, the factory was a dominant manufacturing unit, and many peasant domestic crafts and trades were directly related to urban factory industry. Some concentrations of particular industries around the town of Tula had developed from the stimulus of urban factory industry. The crafts may be divided by the raw material used, which also largely reflects the organisation of the craft. Those crafts and trades whose raw materials were more obviously associated with the farm or village such as leather and wood had grown up in a "natural" economy and, by the late nineteenth century, were declining relatively, while those using other raw materials such as metal were more closely linked to, and dependent upon, urban industry. In Tula, the majority of samovars were produced by kustars in rural villages and in small workshops.98

The samovar industry was characterised by a distinct distribution of labour amongst kustars. They generally did not work on their own account, but received orders from manufacturers or workshops, from whom they also received their requisite raw material. In the manufacture of samovars only the lower part the so-called poddon, or stand, and the faucet and handles were moulded, the remaining parts, namely, the body of the samovar, the neck that joined it to the stand, the interior pipe and the crown or top ring (konforka) were welded out of sheet latten, and beaten up by means of

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98 In some industries, factory production gradually superseded domestic industry, but this was not universally the case. Often domestic manufacture in the village was directly stimulated by factory industry, originating through the put-out system, as in the case of Tula samovars, or certain branches of cotton manufacture. The complex interrelations of factory and domestic industry have been thoroughly explored by M. Tugan-Baranovskii, Russkaya fabrika v proshlom i nastoyashchem, St. Petersburg: 1907, see Chapter 12.
hammers. The lids were mostly made at manufactories where they were stamped under presses. In the 1880s a new method was invented by local workers for manufacturing the lid directly from the sheet by means of pressing it into a form attached to the rotating spindle of a lathe, and by using a special instrument called davilnik. Due to this new method it became possible for the kustar to manufacture all the parts of the samovar.99

The total number of workers engaged in the samovar industry in the Tula region "amounted to several thousands, and the value of the production, because of the costliness of copper, attains to not less than 3,000,000 roubles. The Sergievsk volost alone, near Tula, makes about 40,000 samovar bodies for the Tula manufacturers." 100

In addition to the traditional area of samovar production, other new and innovative areas of production were centred on Tula. By the early nineteenth century, a beginning had been made with the cultivation of beet sugar and in 1802 the first beet sugar plant in Russia was founded in Tula, with government help, by a Tula landlord - Major-General E. Blankenhagel.

In conjunction with the development of industry, Tula experienced a population increase. Between 1744 and 1762 Tula's population numbered approximately 25,000. "With nearly 4,600 houses, barely three per cent of which were constructed of stone ...Tula also combined considerable industrial production with prosperous trade."101 In comparison to the ten factories and fifty-

100 J.M. Crawford, The Industries of Russia. pp.133-134.
seven plants in Iaroslavl, Tula had sixty-two factories and 192 plants. In addition, there were 432 blacksmiths shops. Having developed rapidly during the reign of Peter the Great as a centre of the armaments industry, Tula became noted for its metal crafts and weapons factories. In 1782 about forty-five per cent of the registered male population was employed in weapons production.

Why did capitalist manufacturing in Russia not make greater progress during the sixteenth to mid-nineteenth centuries? Certainly, such things as lack of raw materials, problems of transport, belated political unification and centralisation, collection of trade duties and road tolls, all have a retarding effect on the development of any capitalist industry, especially at the very beginning when perseverance in the face of such obstacles is likely to be especially difficult. But all countries which have experienced intensive capitalist development have faced similar problems and in some way have overcome them. However, recalling Russia’s problems with geography and politics does not so much explain why her capitalistic development in this period was so limited. Instead, it forces a rephrasing of the question as to why those particular obstacles at that particular time had such a great effect. Posing the problem in this manner will account not only for the geographical and political context in which Russian capitalism appeared, but for the substance of its development.

Capitalism is above all a series of social relationships resting upon a certain technological and economic foundation. Specifically, capitalism means that wage-workers sell their labour power to those who have invested capital in the technology required for the profitable and competitive production of commodities. Any analysis of capitalism’s growth, whatever the stage, should focus upon those
three factors: class relationships, the availability of capital, and the prevailing state of technology. Given the proper relationship among these three elements, the greatest natural barriers will be overcome; and if the social forces concerned with capitalistic activity are sufficiently powerful, the most confining political practices and institutions will be thrust aside.

Certainly, Russia from the sixteenth century onwards lacked neither capital nor access to the most modern industrial techniques of Western Europe. foreigners such as Andrei Vinius, Peter Marselis, Heinrich von Rosenbusch, and Werner Müller accumulated large fortunes from their commercial activities and were capable of minimising the inevitable risks of investment in manufactories by obtaining large loans, advances, and gifts from the state. And then there were Russian feudalists far wealthier than any foreigner in Russia at the time, among them Boris Godunov, Aleksei Mikhailovich, Nikita Romanov, Prince I.K. Cherkasskii, Morozov, Miloslavskii, Trubetskoi, Odoevskii, and above all, the Stroganov family. As for technology, it scarcely presented an insuperable problem. It was possible for Marselis and other foreigners to bring Western European engineers and masters to Russia to build and operate factories. Most interesting, perhaps, is the fact that by the 1680s the Russians had taken great steps toward mastering for themselves many of the esoteric secrets of Western engineering. Yet industrialisation proceeded only gradually.

The answer lies in the state of Russia's class relationships. Capitalism, as a mode of production, does not attain great strength until the disintegration of feudalism reaches an advanced stage. The essence of feudalism is the attachment of the great mass of the population to dispersed agrarian communities where "natural"
relationships are dominant between individuals, and the rather small 
demand for commodities is satisfied by local markets and artisans. At 
the base of the entire movement from a feudal-agrarian to a 
bourgeois-industrial order is the separation of the agricultural 
workers, whether slaves, serfs, or yeoman peasants, from the land 
which is simultaneously the means of their livelihood and the source 
of their economic backwardness. Such dispossession of the peasants by 
their "social betters" usually follows in the wake of technological 
improvements in agriculture which make it possible to feed large 
groups of people no longer engaged in farming. In fact, such 
technological innovation actually creates a class of "unemployed" 
peasants no longer needed on the land, a class which is then forced to 
seek its living in a new way by selling labour power to entrepreneurs 
endowed with capital and ready to undertake commodity production 
in search of profits. A rising curve of inflation and the increasing 
dominance of cash relationships over earlier "natural" exchange are 
also likely features of this period, for it is the new importance of 
money that makes agricultural reform both necessary and possible: 
necessary because inflation generates pressures on the style of life to 
which the aristocrat is accustomed, possible because of the increased 
income available to landlords who place their produce on the open 
market. The dynamics of the consumer market, and its tendency to 
provide increasing quantities of goods and to bring ever-fresh layers 
of the population into cash relationships, are factors which also made 
profits from industrial activity a reality for the early capitalist. A final 
element in this process is the development of a sharp polarisation 
within the artisan community. As the more fortunate 
handicraftsman evolves into a nascent entrepreneur holding capital 
and exploiting labour-power, his less successful counterparts move
toward the status of wage labourers hired by those who are able to hold, and expand, the new instruments of production.

The inevitable conclusion of this analysis is that serfdom was the main barrier to extensive capitalist development in Russia prior to the mid nineteenth century. The manner in which it bound the peasant to the land precluded the availability of large masses of wage workers and, in any case, the natural economy and rapacious exploitation which was intensified by the serf order made such workers unnecessary. Few people had money to exchange for commodities so their industrial demands remained minimal. Markets for cash goods were small and industrial possibilities limited. To be sure, we do find significant capitalist tendencies in Russia in this period, even apart from the construction of factories. Most notably were the formation of an all-Russian market, an international commerce, a certain emphasis on obrok (quit-rent) rather than barshchina (corvée) in feudal relationships between lord and serf, the use of wage-labour in such traditional activities as river shipping and some handicrafts, and even the polarisation within the artisan community. But because agriculture remained the primary source of profit for the ruling order of tsar, church, and nobility, the condition of the agricultural worker changed not in the direction of greater freedom and social mobility but rather in the direction of greater entanglement in the economic cycle of the manorial system.

Thus, Russian manufacturing lacked broad opportunities for growth. The needs of the state (especially for war) provided a certain market for native factories, as did the desire for luxury goods among some members of the ruling class. A few enterprises were designed solely for export activity. But if some manufacturers relied upon consumer demand for part of their profits, no more than a few were
able to base themselves solely upon production for the open market. The broad social changes had not yet occurred which might have created a situation in which the masses had sufficient purchasing power to justify foreign and native entrepreneurs undertaking intensive manufacturing activity. As a result, industrialists in this period, for the most part, took advantage of opportunities to build their enterprises only when profitable operation seemed all but guaranteed. Foreigners no less than Russians accepted the feudal framework with its strange mixture of opportunities and limitations, and adapted themselves to the existing realities of economic life. Manufacturers relied upon royal patronage and privileges, and accepted ascribed serfs for unskilled labour. If the enterprises organised in this fashion strengthened the Russian economy and laid the foundation for further capitalist advances they had no discernible influence on the "feudal" economic patterns.

In fact, the most striking indication of the resilience of feudal institutions vis-à-vis early capitalistic manufacturing is the further development of artisanry during and after the seventeenth century. Although the expansion of Russian handicrafts was not great during the seventeenth century, the number of artisans grew considerably during the Petrine period, reaching a high point "between 1750 and 1850, and particularly in the last twenty-five years of that period."102 The state smiths at Tula, for example, grew from thirty masters in 1595 to seventy in 1635 and 1,161 in 1720. The continued vigour of Russian artisanry is but one indication that the kinds of shifts within Russian society which would have laid the basis for a more rapid and extensive development of capitalist manufacturing were not taking

102 Blum, Lord and Peasant, p.302.
place. Thus, small-scale production units (such as one-room peasant workshops) grew rapidly while large-scale factories declined to such an extent that, in the words of Tugan-Baranovskii "the kustar (independent peasant handicraft) triumphed over the factory owner in pre-Reform Russia."\(^\text{103}\)

Post-Emancipation industrialisation in the second half of the nineteenth century

Tula's population grew and the city was a major urban centre\(^\text{104}\) in European Russia in the early part of the nineteenth century (refer to Tables 2-3 and 2-4 below).

Table 2-3: Population growth of the city of Tula, 1811-1897.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1811</td>
<td>52,084</td>
</tr>
<tr>
<td>1825</td>
<td>38,391</td>
</tr>
<tr>
<td>1840</td>
<td>51,735</td>
</tr>
<tr>
<td>1856</td>
<td>50,641</td>
</tr>
<tr>
<td>1870</td>
<td>57,374</td>
</tr>
<tr>
<td>1885</td>
<td>63,928</td>
</tr>
<tr>
<td>1897</td>
<td>114,733</td>
</tr>
</tbody>
</table>


Table 2-4: Population of major urban cities in Russia in 1811.

1. St. Petersburg 335,600
2. Moscow 270,200
3. Vilno 56,300
4. Kazan 53,900
5. Tula 52,100
6. Astrakhan 37,800


\(^\text{104}\) Following the Pugachev rebellion of 1773-1775 the statute on *guberniia* (province) administration of 7 November, 1775 divided Russia into 40 *guberniias*. Each *guberniia* was divided into several (on the average about 10) districts or *uezdy*. In 1777, Tula was divided into 12 districts *uezdy*. The city became the centre of Tula province in 1796.
7. Riga 32,000
8. Saratov 26,700
9. Orel 24,600
10. Iaroslavl 23,800

Source: Rashin, Naselenie Rossii, tables 80, 82, and 84, pp. 119-21.

In 1870 Tula had a population of 57,374 (30,258 males and 27,116 females) which was comprised of 2,567 nobles (of which 1,162 were hereditary), 117 honourable citizens (pochetnyi grazhdan) - a title conferred in tsarist Russia on persons not of noble birth for services, 2,021 blacksmiths or ironsmiths, 11,037 tradespeople, 10,384 artisans (tsekhovykh), 21,259 armament workers (oruzheinikov), and 2,606 peasants.105

Leaving aside persons of the Russian orthodox faith, there were 1,125 Old Believers (raskolnikov),106 495 Catholics, 109 Protestants, 487 Jews, twenty-five Muslims, and two monks.107

In 1873, there were thirty-eight stone orthodox churches108 and one Protestant, 9,387 houses (of which 665 were stone), 1,207 shops, five chemists, and a hospital consisting of four wards of 225 beds which were used for men, women, veterans, and a lunatic asylum. A clinic for outpatients previously had opened in 1864 and an invalid home was also operating and housed five persons.109

By itself, Emancipation110 did not produce any immediate or spectacular changes in the industrial life of Tula. By ending the

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105 Semenov, Geografichesko - Statisticheskii Slovar, p.239.
106 The official term for the church dissenters who left the Orthodox church organisation in the second half of the seventeenth century. The dissenters called themselves starovery (Old Believers) or staroobriady (Old Ritualists).
107 Semenov, Geografichesko - Statisticheskii Slovar, pp.239-240.
108 The most prominent of which was the Uspenskii cathedral, constructed in 1763.
109 Semenov, Geografichesko - Statisticheskii Slovar, p.240.
110 The Emancipation of Serfs in 1861 saw Tula's peasants lose 125,000 desiatina of land. After the reforms of 1861 the last of the compulsorily tied Tula armament workers were freed. In 1877, the nobility owned 85.1 per cent of all privately owned land in Tula province. In 1905, this amount dropped to 64.1 per cent. In the same year 87.7 per cent of all peasant land holdings in Tula province constituted less than 3
system of feudal obligations, the reform put an end to the votchinal and possessional factories' use of forced labour. The reform also removed some, though by no means all, of the obstacles which had previously kept peasant serfs from entering the industrial labour market, and thereby opened the way to further development along capitalist lines. Nevertheless, for the next twenty-five years the overall rate of economic growth in Tula averaged no more than three to 3.5 per cent per annum, with alternating periods of expansion and depression. Only after 1885 did the economy enter a period of more rapid expansion with growth levels in the 1890s reaching six to nine per cent per annum. However, the pace of growth remained uneven from one industry to another, and from one year to the next.

An overall picture of Tula's industrial growth in the latter half of the nineteenth century can be obtained from the following tables. Table 2-5 traces the development of individual industries in Tula, whilst Table 2-7 surveys the development of principal branches. Like other industrial statistics of this period, these probably present an incomplete picture. They pertain only to those industries which fell under the jurisdiction of the Department of Trade and

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A pre-revolutionary economist lanson estimated that a minimum of 5 desiatina was needed to sustain a peasant family. Iu. lanson Opyt statisticheskogo issledovaniia o krestianskikh nadelakh i platezhakh. St. Petersburg: 1881, p.71. Between 1858-1863 there were 213 peasant "disturbances" in the Tula province on a yearly basis and these can be broken down as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of &quot;disturbances&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1858</td>
<td>22</td>
</tr>
<tr>
<td>1859</td>
<td>13</td>
</tr>
<tr>
<td>1860</td>
<td>19</td>
</tr>
<tr>
<td>1861</td>
<td>82</td>
</tr>
<tr>
<td>1862</td>
<td>29</td>
</tr>
<tr>
<td>1863</td>
<td>48</td>
</tr>
</tbody>
</table>

These figures represent a greater number of disturbances than the preceding 60 years. Source: V.I Krutikov, "Krestianskoe dvizhenie v Tulskoi gubernii v 1858-1863 gg.," in Ezhegodnik po agrarnoi istorii Vostochnoi Evropi 1963g. Vilno: 1964, p.714.

111 For a general critique of late nineteenth century Russian industrial statistics, see Sbornik statisticheskikh svedenii po Moskovskoi gubernii... vol. IV, Ch.2.
Manufacturing, and thus exclude several important branches of production. These statistics exclude handicraft and artisan enterprises, yet the criteria by which such enterprises were defined were not consistently applied, so that some might well have been included.\footnote{In 1881, factories were defined as enterprises whose annual output was valued at more than 2000 roubles, yet smaller enterprises were included in summarised data. In 1900 a work force of fifteen or more was to be the defining criterion of a factory, yet some of the factories on the list had as few as one worker.} Temporary shutdowns or fluctuations in a factory's output are a further possible source of distortion. Beyond these problems, there is still the possibility of carelessness, deliberate distortion, inconsistent procedures and discontinuities from one compilation to the next.
### Table 2-5: Factory production in Tula for 1873

<table>
<thead>
<tr>
<th>Animal Products</th>
<th>Number of Factories</th>
<th>Number of Workers</th>
<th>Sum total of production in roubles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tallow-melting</td>
<td>1</td>
<td>6</td>
<td>27,720</td>
</tr>
<tr>
<td>Candle-making</td>
<td>3</td>
<td>28</td>
<td>40,240</td>
</tr>
<tr>
<td>Soap-making</td>
<td>1</td>
<td>2</td>
<td>1,065</td>
</tr>
<tr>
<td>Leather-products</td>
<td>5</td>
<td>501</td>
<td>460,420</td>
</tr>
<tr>
<td>Tawed leather</td>
<td>1</td>
<td>22</td>
<td>7,800</td>
</tr>
<tr>
<td>Brush-making</td>
<td>4</td>
<td>125</td>
<td>201,500</td>
</tr>
<tr>
<td>Bone-by products</td>
<td>1</td>
<td>5</td>
<td>2,308</td>
</tr>
<tr>
<td>Melliferous products</td>
<td>1</td>
<td>6</td>
<td>3,560</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td>695</td>
<td>744,613</td>
</tr>
<tr>
<td>Vegetable Products</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar-refining</td>
<td>2</td>
<td>410</td>
<td>672,500</td>
</tr>
<tr>
<td>Mead-brewing</td>
<td>4</td>
<td>17</td>
<td>48,010</td>
</tr>
<tr>
<td>Tobacco</td>
<td>1</td>
<td>90</td>
<td>37,800</td>
</tr>
<tr>
<td>Varnished/lacquered products</td>
<td>2</td>
<td>4</td>
<td>5,100</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>521</td>
<td>763,410</td>
</tr>
<tr>
<td>Iron Products</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samovars</td>
<td>47</td>
<td>1,528</td>
<td>725,432</td>
</tr>
<tr>
<td>Locks</td>
<td>25</td>
<td>916</td>
<td>337,000</td>
</tr>
<tr>
<td>Arms</td>
<td>3</td>
<td>27</td>
<td>13,590</td>
</tr>
<tr>
<td>Cast-iron smelting</td>
<td>1</td>
<td>7</td>
<td>2,100</td>
</tr>
<tr>
<td>Iron foundry(^{113})</td>
<td>4</td>
<td>69</td>
<td>23,102</td>
</tr>
<tr>
<td>Copper smelting</td>
<td>1</td>
<td>18</td>
<td>4,500</td>
</tr>
<tr>
<td>Tiles &amp; bricks</td>
<td>8</td>
<td>69</td>
<td>15,734</td>
</tr>
<tr>
<td>Pottery</td>
<td>1</td>
<td>4</td>
<td>1,300</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>2,638</td>
<td>1,122,758</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accordions(^{114})</td>
<td>13</td>
<td>435</td>
<td>52,311</td>
</tr>
<tr>
<td>Carriages</td>
<td>2</td>
<td>10</td>
<td>5,530</td>
</tr>
</tbody>
</table>

\(^{113}\) At the end of the nineteenth century in Tula province four small iron foundries were operating: Duginskii, Dubenskii, Cherepetskii and Khaninskii.

\(^{114}\) The first Tula accordions appeared in 1830-1835.
An examination of Table 2-5 reveals that in 1873, 132 factories and works (excluding the state armaments factory) in Tula employed 4,350 workers, producing 2,726,322 roubles worth of goods. Tula's central industry revolved around metalworking, and as we have seen, its genesis can be traced back to 1595. In 1870, Tula had 4,849 artisans (of whom 1,350 were masters), 2,204 workers, and 1,295 apprentices. All of these were primarily concentrated in three occupations as Table 2-6 outlines.

Table 2-6: Artisan population of Tula by industry in 1870

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Masters</th>
<th>Workers</th>
<th>Apprentices</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>149</td>
<td>237</td>
<td>175</td>
<td>561</td>
</tr>
<tr>
<td>Clothing</td>
<td>169</td>
<td>263</td>
<td>327</td>
<td>759</td>
</tr>
<tr>
<td>Handicraft</td>
<td>552</td>
<td>1,414</td>
<td>667</td>
<td>2,683</td>
</tr>
<tr>
<td>Other</td>
<td>480</td>
<td>290</td>
<td>126</td>
<td>896</td>
</tr>
</tbody>
</table>


Table 2-7: The development of principal branches of industry in Tula, 1862-1900

<table>
<thead>
<tr>
<th>Type of production</th>
<th>1862</th>
<th>1875</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of enterprises</td>
<td>Number of workers</td>
<td>Production in roubles (1000s)</td>
</tr>
<tr>
<td>Armaments</td>
<td>1</td>
<td>3600</td>
</tr>
<tr>
<td>Ammunition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samovar</td>
<td>31</td>
<td>986</td>
</tr>
<tr>
<td>Lock</td>
<td>23</td>
<td>768</td>
</tr>
<tr>
<td>Iron (foundries)</td>
<td>7</td>
<td>114</td>
</tr>
<tr>
<td>Accordion</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Leather/tannery</td>
<td>8</td>
<td>628</td>
</tr>
<tr>
<td>Sugar refining</td>
<td>1</td>
<td>54</td>
</tr>
<tr>
<td>Sub-total</td>
<td>76</td>
<td>6192</td>
</tr>
<tr>
<td>Total (including remaining branches)</td>
<td>103</td>
<td>6422</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of production</th>
<th>1883 Number of enterprises</th>
<th>Number of workers</th>
<th>Production in roubles (1000s)</th>
<th>1895 Number of enterprises</th>
<th>Number of workers</th>
<th>Production in roubles (1000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armaments</td>
<td>1</td>
<td>3000</td>
<td>2000.0</td>
<td>1</td>
<td>9836</td>
<td>5335.2</td>
</tr>
<tr>
<td>Ammunition</td>
<td>1</td>
<td>780</td>
<td>1482.0</td>
<td>1</td>
<td>3800</td>
<td>4404.1</td>
</tr>
<tr>
<td>Samovar</td>
<td>41</td>
<td>1275</td>
<td>678.2</td>
<td>58</td>
<td>2485</td>
<td>1381.5</td>
</tr>
<tr>
<td>Lock</td>
<td>43</td>
<td>879</td>
<td>407.7</td>
<td>45</td>
<td>1230</td>
<td>432.5</td>
</tr>
<tr>
<td>Iron (foundries)</td>
<td>9</td>
<td>290</td>
<td>149.0</td>
<td>10</td>
<td>150</td>
<td>207.6</td>
</tr>
<tr>
<td>Accordion</td>
<td>14</td>
<td>173</td>
<td>75.2</td>
<td>14</td>
<td>240</td>
<td>59.6</td>
</tr>
<tr>
<td>Leather/tannery</td>
<td>6</td>
<td>748</td>
<td>1531.2</td>
<td>2</td>
<td>172</td>
<td>184.7</td>
</tr>
<tr>
<td>Sugar refining</td>
<td>1</td>
<td>415</td>
<td>4800.0</td>
<td>1</td>
<td>415</td>
<td>3000.0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>116</td>
<td>7560</td>
<td>11123.3</td>
<td>132</td>
<td>18328</td>
<td>15005.2</td>
</tr>
<tr>
<td><strong>Total (including remaining branches)</strong></td>
<td><strong>157</strong></td>
<td><strong>7876</strong></td>
<td><strong>11386.8</strong></td>
<td><strong>285</strong></td>
<td><strong>21750</strong></td>
<td><strong>16871.2</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of production</th>
<th>1900 Number of enterprises</th>
<th>Number of workers</th>
<th>Production in roubles (1000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armaments</td>
<td>1</td>
<td>7000</td>
<td>454.8</td>
</tr>
<tr>
<td>Ammunition</td>
<td>1</td>
<td>1298</td>
<td>4000.0</td>
</tr>
<tr>
<td>Samovar</td>
<td>41</td>
<td>1735</td>
<td>918.1</td>
</tr>
<tr>
<td>Lock</td>
<td>45</td>
<td>825</td>
<td>1025.2</td>
</tr>
<tr>
<td>Iron (foundries)</td>
<td>11</td>
<td>676</td>
<td>462.0</td>
</tr>
<tr>
<td>Accordion</td>
<td>30</td>
<td>253</td>
<td>24.9</td>
</tr>
<tr>
<td>Leather/tannery</td>
<td>2</td>
<td>180</td>
<td>160.0</td>
</tr>
<tr>
<td>Sugar refining</td>
<td>1</td>
<td>750</td>
<td>5000.0</td>
</tr>
<tr>
<td>Sub-total</td>
<td>132</td>
<td>12717</td>
<td>12045</td>
</tr>
<tr>
<td><strong>Total (including remaining branches)</strong></td>
<td><strong>251</strong></td>
<td><strong>15969</strong></td>
<td><strong>13019</strong></td>
</tr>
</tbody>
</table>


Despite all of the statistical impediments alluded to above, the tables provide the fullest available data on Tula's industrial growth in these years. In 1900, within the Tula province there were located 251 factories and works in which 15,969 workers and masters laboured. The largest factory was the Imperial Tula armaments works where some 7,000 people were employed. In addition to this there were the
Batashev samovar factory and the Tula cartridge factory with 1,298 workers.\textsuperscript{115}

The most interesting aspect of the tables is the comparison between the growth of the work force, the total output, and the number of factories in each industry. In almost every case, the number of factories grew slowly or even declined, while the number of workers increased rapidly and the output grew, still more rapidly. This pattern is quite consistent with overall trends in the Russian economy, which also experienced a concentration of industrial production in large-scale enterprises coupled with an expansion of the scale of production.\textsuperscript{116}

Tula's industrial development thus parallels the overall curve of Russia's growth in the last four decades of the nineteenth century.\textsuperscript{117} The Emancipation itself was accompanied by a drop in industrial production, due in part to the loss of serf labour in the metal industry of the Urals, and in part to the international shortage of cotton caused by the American Civil War. The economy took an upward turn in the mid-1860s, lost ground in 1867 and 1868 and more seriously in 1873, and entered a new expansionist phase in 1877-80. The early 1880s were a period of serious depression from which the economy did not fully recover until 1887. Three years later, in 1890-91, a new slump occurred, but from 1893 until 1899-1900 the economy


\textsuperscript{116} By P.A. Khromov's computation, in the decade 1890-1900 the number of factories and plants in Russia grew by eighteen per cent, the number of workers by sixty-six per cent, and the value of output by 100 per cent. P.A. Khromov, Ekonomicheskoe razvitie Rossii v XIX-XX vekakh, Moscow: 1950, p.217.

\textsuperscript{117} The summary which follows is based on the following: P.A. Khromov, Ekonomicheskoe razvitie Rossii v XIX-XX vekakh, Moscow: 1950, pp.213-218; Alexander Gerschenkron, "The rate of Industrial Growth in Russia since 1885," in The Tasks of Economic History, vol. 7 1947, pp.144-157.
expanded at rates which had no precedent in the history of the older capitalist nations. After 1900 (a period not covered by the present study) Russia was hard-hit by a new depression, the effects of which were felt until 1909.

We get a very different picture of the Russian economy in these years if, instead of tracing year to year quantitative changes, we turn our attention to qualitative or structural ones. In doing so, we can see more continuity between the post-Emancipation decades and the boom years of the 1890s. The major trends and changes of the later years can be seen to have their roots in much earlier developments: the growth of railroads; the expansion of heavy industry generally, and of machine building in particular; the mechanisation of light industry; and the expansion of large-scale enterprises and decline of medium-size ones.

Probably the single most important change in the Russian economy after 1860 was the construction of a network of railroad lines throughout European Russia. Railway construction had begun in the 1840s, when the first major line, the "Nikolaevskii," was begun between St. Petersburg and Moscow. It was completed in 1851. In the aftermath of the Crimean War the construction of new lines became a matter of urgent priority for the Russian government (due to military needs), and the rate of railroad building increased dramatically.118 The same advantages of location which had aided Moscow's rise in the fourteenth and fifteenth centuries now made the city the natural hub of the new rail network. Lines were opened from Moscow to Nizhnii Novgorod (1868), Riazan (1864), Kursk via Tula

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118 The total length of Russian rail lines was 1,626 km. in 1861; 22,865 in 1880; and 53,234 in 1900. P.A. Khromov, *Ekonomicheskoe razvitie Rossii v XIX-XX veakh*, Moscow: 1950, p.462.
(1868), Smolensk and Iaroslavl (both 1870) facilitating the movement of people and goods into the city and boosting Moscow's role as a centre of commerce and industry.

The growth of the machine building industry typifies the industrial expansion of the post-Emancipation decades. The growth of the railways created a demand for rails and rolling stock. Throughout the 1860s and '70s, much of this demand was met by imports, but domestic production also increased rapidly with the Russian government's active encouragement. In particular, the foundations were laid for the development of the iron and coal resources of the Donets and Krivoi Rog regions of the Ukraine, where output soared dramatically after 1885. At the outset of this expansion, locomotive and railroad car construction was centred in St. Petersburg which, as a seaport, was more favourably situated for importing the necessary raw materials. In the 1870s, however, the centre of such production shifted toward the south and east, to the city centres of Moscow and Kolomna, the Sormova region of Nizhnii-Novgorod, and the Briansk region of Orel province. These localities were favoured, not so much for their natural resources, as for their ability to bring together labour and raw materials and to ship their products to all parts of European Russia. St. Petersburg's access to the sea was thus counter balanced by Moscow's access to the rapidly developing hinterland, access which the railroads had made possible.

In the light manufacturing industry the most dramatic development of the post-Reform decades was the rapid progress of mechanisation. This was especially pronounced in the cotton industry, where the number of mechanised weaving mills grew from
forty-two in 1866 to ninety-two in 1876.\textsuperscript{119} Predictably, this transformation led to a great increase in output, and to a basic reorganisation and centralisation of production: the cottage looms and peasant workshops of the previous era were overshadowed by large modern factories. Meanwhile, the previously mechanised cotton spinning industry experienced further technological improvements, as did the cotton dyeing and dye printing industries. In addition, cotton production gradually came to be concentrated in large mills which combined all the different phases of production. The largest of these were located in Moscow and Vladimir Provinces, which by the end of the century not only maintained their earlier pre-eminence in cotton weaving, but also surpassed St. Petersburg in spinning.

The cotton industry in the central provinces was also aided by Russian expansion in Central Asia, illustrating the interplay of economic and political factors in Russia's development: the opening of rail lines to Tashkent and Transcaucasia in the late 1880s and early '90s, together with a high tariff on imported cotton, led to a rapid growth of cotton plantations in these recently annexed regions. In 1888, domestic production of cotton amounted to only 1.2 million puds on top of the 7.9 million puds imported during that year; by 1900, Turkestan and the Transcaucasian region were producing 5.8 million puds per annum - more than one-third of Russia's total consumption. Almost all of the Central Asian cotton was shipped to European Russia for processing.

A trend toward mechanisation, increased productivity, and concentration of production in larger enterprises could be seen in a number of other light industries in these years. In the silk industry

\textsuperscript{119} M.I. Tugan-Baranovskii, \textit{The Russian Factory in the 19th Century}, p.364
this process was only beginning at the end of the nineteenth century, with the growth of such enterprises as the Zhiro and Moscow Silk Factories, each of which employed more than 2000 workers and used steam powered equipment for part of its production. Woollen production, on the other hand, had been concentrated in larger establishments since the appearance of the first *votchinal* and possessional factories in the eighteenth century. Mechanisation was widespread in the 1860s and '70s, but in subsequent decades the woollen industry had difficulty competing with cheaper textiles.\(^{120}\) As a result, output grew quite slowly, and the number of workers declined as smaller factories went out of business. This pattern was especially pronounced in the production of coarse woollen broadcloth (*sukonnoe proizvodstvo*).

Outside the textile industries, mechanisation was most pronounced in the food processing industries, especially sugar-refining. The rapid growth of this branch of production, like the expansion of the textile industry, undoubtedly reflects the development of market relations throughout the country, as ever increasing numbers of peasants came to substitute factory products for home-made ones.

Although industrialisation came to Russia after the majority of Western countries, its first "industries" were already in existence by the sixteenth century, under Ivan IV, and in some cases even earlier. These were mainly small copper, silver and in Tula iron mines and workshops producing cannon, rifles and other iron products.

The eighteenth century witnessed a very spectacular, though short lived, rise in Russian mining and industrialisation. But the serf-

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orientated Russian industry proved incapable of competing with Western industries, based on hired labour, as soon as machines began to spread in those countries towards the end of the century. The cheap labour provided by serfdom which had been an important asset for the primitive Russian industries of the early eighteenth century, but became a burdensome liability by the end of that century. Compared with the British experience, it actually delayed by at least a century the coming of the industrial revolution in Russia.

It was, therefore, only towards the end of the nineteenth century that the conflict between workers and capitalists began to appear on a national scale in Russia. Only then, under the impact of favourable government policies, did traditional Russian society begin to undergo a rapid transformation. Vast rural areas were soon converted into factory villages, and urban centres expanded to absorb new factories, shops, and residential districts. But most significantly of all, a new and greatly enlarged working population was formed as tens of thousands of peasants migrated from the countryside, forsaking their ploughs for jobs in cities and towns.

Labour force statistics testify to the magnitude of the changes that took place in the 1890s, a period of accelerated economic growth. More than one million men and women - most of them peasants - entered the industrial labour force between 1887 and 1900, bringing the total number of factory and mine workers at the turn of the century to 2.4 million. But industrial employment represented only one aspect of the growing non-agricultural economy. During the 1890s, thousands of peasants found jobs in artisanal trades and in an expanding network of "putting-out" industries in the cities and countryside. Still others earned a livelihood in commercial firms and in the flourishing service, construction, transportation, and
communications sectors of the economy. Another large group joined the ranks of day labourers. In all of these categories combined, there were 6.4 million hired workers in the Russian Empire in 1897, the year of the country’s first national census.\footnote{Chislennost i sostav rabochikh v Rossi na osnovanii dannykh pervoi vseobshchei perеписи населения Rossiiskoi Imperii 1897 g., 2 vols, St. Petersburg: 1906, I, pp.viii-xx.}

The Russian working class consisted of heterogeneous elements employed in many different occupations and industries. Together these diverse groups were destined to play a crucial role in the country's future, and by 1900 they were already showing signs of volatility and a propensity for collective action that could not be ignored. In the 1890s, factory groups in the capital city, St. Petersburg, mounted the first large-scale city-wide strikes in Russia, and less than a decade later, during the 1905 revolution, workers throughout the Empire joined in upheavals that decisively challenged the autocratic system, forcing the government to give in to demands for constitutional reform. When the old regime finally collapsed during the February Revolution, workers once again moved to the forefront of the popular movement, this time helping to bring the Bolshevik party to power in October 1917.

As we move toward the latter half of the nineteenth century it is clearly evident that foreign entrepreneurs proved essential to break the technological barrier separating artisan production from the manufactory, though the existence of Russian artisanal talent made the absorption of Western technology much easier.\footnote{For a discussion of entrepreneurs who emerged from Tula see, N. I. Pavlenko, "O proiskhozhdenii kapitalov, vlozhennykh v metallurgiiu Rossii XVIII v.,” in Istoricheskie zapiski, LXII 1958, p.170.} The flourishing of a cottage industry in the nineteenth century, a phenomenon which occurred in almost all branches of manufacturing in Russia, has been
explained by Tugan-Baranovskii as an outgrowth of the eighteenth century factories. Many of them, such as silk-weaving and cigarette-wrapping, involved products and processes which were unknown in the traditional peasant household. Peasants learned these crafts at factories, but having mastered them were able, under existing low levels of technology, to set up production in their own cottages. Some factory owners complained of unfair competition which such kustari offered, but many others managed to incorporate the kustar into production, through the "putting-out" system. This was the case, for example, in the Tula samovar industry.

Consequently, for much of the nineteenth century small-scale manufacturing establishments outweighed large ones, and important centres of production were located outside the cities. Russian industry developed in a peasant milieu, and industrial or semi-industrial labour became an accepted part of peasant life. Towards the end of the nineteenth century industrial growth in Tula occurred at an accelerated rate, and was accompanied by diversified production, mechanisation, and concentration of production in large factories. Significant as these developments might have been, the majority of Tula's industries were not created in a vacuum, but rather evolved from the industries and traditions of an earlier era. Much of Tula's industrial boom in the 1890s took place in old, established firms. This meant that workers were toiling, eating, and sleeping in many of the very same buildings that their forebears had occupied half a century earlier. This element of historical continuity was especially pronounced in the iron manufacturing industries, which employed

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more than seventy per cent of Tula’s factory workers. One of the major concerns of the next chapter will be to explore the social origins of this labour supply.
Chapter 3

Origins of Labour Supply
At several points in the previous chapter mention was made of the ties between industrial Tula and the peasant economy of the surrounding provinces. The reader will recall that during the era of serfdom some peasant serfs were forced to perform labour service (barshchina) in votchinal and possessional factories but many others were able to work on the side as "free" wage labourers, using a part of their wages to pay their feudal dues in cash (obrok). An extension of this latter arrangement was the system of otkhodnichestvo or the temporary departure of peasants from their native villages in search of extra income. Some carried with them the products of village handicrafts to peddle in distant markets, others engaged in small-scale commercial ventures, worked in construction projects, or hauled barges on the great waterways, and many went to work in factories.

By the late eighteenth century, the system of departures had grown to such an extent that an estimated one-third of the adult male serf population of Iaroslavl province received passports to engage in non-agricultural trades.\(^1\) The military governor (voevoda) of Dmitrovskii uezd, Moscow province, complained of ruined homes and abandoned fields, in his view, the result of unnecessary departures by obrok-paying peasants.\(^2\)

In the first half of the nineteenth century, when the growing manufacturing industries of Tula guberniia were using wage labour

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1 M.I. Tugan-Baranovskii, *The Russian Factory in the 19th Century* Richard D. Irwin Co., Homewood, Ill: 1970, trans. from *Russkaia fabrika v proshlom i nastroitshchem* 3rd ed., Moscow: 1922, p.37. Other evidence suggests that by 1782, eighty-five per cent of the serf population of Kostroma guberniia was paying obrok, in Iaroslavl guberniia, the figure was seventy-eight per cent, in Kaluga fifty-eight per cent, in Vladimir fifty per cent, and in Moscow guberniia a surprisingly low thirty-six per cent, R.S. Livshits, *Razreshchenie promyshlennosti v dorevoliutsionnoi Rossi* Moscow: 1965, p.63, citing V.I. Semevskii. Of course, not all of those who paid obrok departed from home to earn it.

almost exclusively, the enserfed peasantry continued to be the main source of the work force, supplying between eighty-five and ninety per cent of all factory workers. Although these workers were nominally free in their relations with factory owners, the serf owning system, in fact, imposed many constraints. Not only did the landlord demand a large share of the peasant's wages as obrok, he also retained his traditional privileges and controls, including the right to farm out serfs to factory owners who would pay the serf-owner directly for their services.

The extent of peasant otkhodnichestvo in the nineteenth century may be gauged from the growth of Tula city. The city's population in the first half of the century marginally increased from 52,100 in 1811 to 56,700 in 1863. In the second half of the century the city was to grow to a total of over 114,000, of whom almost ninety per cent were legally classified as peasants. Much of the present study will be devoted to explaining the background to these statistics and their implications for the role of these peasant migrants in Tula's future development. Before these questions can be tackled, however, the

3 M.I. Tugan-Baranovskii, *The Russian Factory in the 19th Century* p.72. This figure includes both manorial and State peasants. The latter group, whose economic position was somewhat more favourable than that of the privately owned serfs, also enjoyed a higher degree of civil freedom. State peasants could depart more easily from their native villages in search of non-agricultural income, and under some circumstances, could abandon their peasant status and become permanent city-dwellers. However, they were still subject to obrok and poll-tax, paid through the village commune (obshchine) under a system of joint responsibility (krugovaia poruka); a member's permanent departure would increase the load on the other members, and for this reason permission was not readily granted. For a summary of the position of State peasants on the eve of Emancipation, see Alexander Gerschenkron, "Agrarian policies and industrialisation, Russia 1861-1917," in *Cambridge Economic History of Europe*, vol. 6, part 2, pp.756-763.

4 M.I. Tugan-Baranovskii, *The Russian Factory in the 19th Century*, pp.72-74. Factory owners are said to have preferred manorial peasants over State peasants because of the cheapness of these arrangements and the docility of the manorial peasants.


juridical framework within which this later peasant migration occurred must be briefly outlined.

Emancipation and the right of departure.

The legal position of peasants who sought work away from their native villages was substantially redefined by the Emancipation settlement of 1861 which ended the landowning class's control over the lives of peasants but left many features of the old social order intact. Although peasants no longer needed their landlord's consent or assistance to marry, engage in commerce or crafts, initiate law suits, and so on, they still found their lives restricted in many respects.

In particular, the reform retained the system of social estates (soslovie, pl. sosloviia) into which each individual was legally classified for the purposes of taxation, military service, and local government. With few exceptions, an individual was assigned at birth to his father's soslovie and remained in it for the rest of his life. The taxed or unprivileged sosloviia included the peasantry, "burghers" (meshchane), artisans (tsekhovye), and merchants. These titles did not necessarily correspond to an individual's occupation or station in life but in conjunction with a system of internal passports they gave every member of society an identity which made it possible for police and other government agencies to keep track of and control his whereabouts. Moreover, every individual was permanently attached to the particular village or town of which his father was a member. The son of a Tula merchant would thus be registered in that city's merchant guild, and could not permanently move to another

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7 Under legislation of 1785, the urban sosloviia were organised as corporate bodies or guilds for municipal government.
city without going through complicated legal proceedings. Similarly, a manorial peasant prior to 1861 was permanently attached to his native village and could travel elsewhere only with his landlord's consent. This system was continued after Emancipation with the one difference that the landlord's controls and prerogatives were now handed over to the village commune, which became the keystone of local administration.

In ending the legal bonds of serfdom, the Russian government created separate, exclusively peasant organs of local administration at two levels, the village and the township (volost). These agencies were charged with the collection of taxes, recording of births and deaths, issue of passports, and adjudication of local disputes. The most striking feature of the reform was that it retained the system of communal obligations and land tenure which had existed under serfdom. A basic principle of the Emancipation was the provision of land to former serfs. In most cases this land was to be purchased from the former serf-owners with the assistance of the government which supervised the transaction and provided long-term loans to the peasants. The land and the burden of repayment were assigned not to individuals but to land communes (obshchiny) whose members were collectively responsible for repayment. The details of these arrangements and the system of periodic redistribution of land allotments among households need not concern us here\(^8\) except to the extent that the decision to remain on the land or seek employment in industry was now to be made, not by the individual alone, but in consultation with the commune.

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\(^8\) The clearest discussion of this subject in English remains G.T. Robinson's *Rural Russia under the Old Regime*, 1932, reprinted University of California Press, Berkeley: 1965, pp.64-93; and Gerschenkron, "Agrarian policies and industrialisation, Russia 1861-1917," pp.717-763.
Under the Emancipation laws, peasants who wished to leave their village to work elsewhere had two options, namely, permanent or temporary departure. Both presented certain difficulties. They could withdraw permanently only by enrolling themselves in some other society, either another commune or the corporate organisation of some other soslovie, generally the meshchanstvo. This was permitted only when certain requirements were fulfilled: 1) the departing member was obliged to return all lands allocated to him by his old commune, and to renounce all future shares in repartition; 2) his departure must not have interfered with the operation of the law on military conscription; 3) the family of the departing member must have paid all taxes in full through to January 1 of the following year; 4) there must have been no private suits (vzyskania, obiazatelstva) pending against the departing member; 5) he must not have been under court investigation or sentence; 6) if his parents were living, they must have given their consent; 7) he must have left no dependants behind in the village without providing for their support; 8) if he had received an allotment of land which had been acquired from the gentry, there must have been no arrears in repayment; and 9) he must have shown evidence, in the form of an invitation (priemnyi prigovor) that he would be permitted to enrol himself in some other society.

These conditions applied to almost all peasants. Those who were directly responsible for redemption payments, that is, heads of

9 Significantly, the legal term for this operation was uvolnenie, dismissal or discharge, the same term applied to the termination of military service or office-holding.

10 Polnoe sobranie zakonov Rossiiskoi imperii, 2nd collection, vol. 36, section 1, no. 36657 ("Obschhee polozhenie o kresianakh..." 19 February, 1861), article 130.

11 The law of February 1861 was concerned with serfs of private landlords; its provisions were extended to State peasants (gosudarstvennye krestiane) by the law of 18 January 1866 Polnoe sobranie zakonov vol. 4, section 1, no. 42899). Exempted from
households, faced further obstacles if they wished to leave the commune. They were obliged to pay in a lump sum one-half of the total redemption debt on the land they had been using, even though the land in question would then revert to the commune. Moreover, the commune must have agreed to take responsibility for repaying the remaining half of the debt. Special permission was needed from provincial authorities if the commune from which an individual was departing was in arrears in its redemption payments, or if one-third of its members had already departed.

To say the foregoing restrictions constituted a formidable set of obstacles would be an understatement. Even leaving aside the problem of land redemption, the tax burden alone was enough to overwhelm most peasants. Younger peasants who were not heads of households might conceivably sidestep the issue of land allotments and redemption but they would be bound by the rule of parental permission, and there were many reasons why a father would not willingly allow his son to escape a share of the family's burdens.

One further reason which could compel absent peasants to return home was election to local office. Under the Emancipation legislation, able-bodied adults who had not previously held local office could not legally refuse to serve in the volost or village administration. The Passport Statute of 1894 specifically mentioned this requirement as grounds for local authorities to refuse to renew a passport.

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these provisions were peasants who had held no land prior to Emancipation Polnoe sobranie zakonov no. 53081a, 25 January 1874, printed in appendix to vol. 49, 1879; widows and spinsters who had no allotment of their own were also permitted to depart unhindered Polnoe sobranie zakonov no. 36657, article 138.  
12 Polnoe sobranie zakonov vol. 36 section 1, no. 36659 (19 February 1851), "O vykupke Krestianamiikh usadebnoi osemdosti, i o sodeistvi Pravitelsta k preobretenii simi Krestianami v sobstvennost polevykh ugodii." article 173.  
13 Polnoe sobranie zakonov vol. 36 section 1, no. 36659 (19 February 1851), articles 173, 174.  
14 Polnoe sobranie zakonov 2nd coll. no. 36657, article 119.
passport but it softened the blow somewhat by declaring that absentee members of a village could be elected only if there was no one residing in the village qualified to serve.\textsuperscript{15}

In addition to the impediments of relocating from the village to the city, were the added difficulties of changing one's legal position. Consequently, throughout the period which concerns us\textsuperscript{16} the vast majority of industrial workers legally remained peasants. Direct evidence of peasants altering their soslovie is not available but census records permit some educated guesses as to the possible scale of transfers. In Tula city, of the three urban sosloviia to which peasants might have transferred, two, namely, the merchants and artisans, showed an absolute decline in membership between 1872 and 1902, while the third group, the meshchane, grew more slowly than the population of the city as a whole at a rate of seventy-four per cent compared to ninety-five per cent.\textsuperscript{17} It is possible that some of those counted as meshchane might have been former peasants. Almost half, that is, 3800 out of a total of 7980 of the meshchane in Tula in 1902 might have been born elsewhere. However, even if all of these had been born peasants, they would have been a small minority alongside the 45,000 migrants who were listed as members of the peasant soslovie.

As this latter figure indicates, peasants who were unable or unwilling to alter their soslovie were not prevented from travelling. They did so by obtaining passports which allowed them to be absent

\begin{footnotes}
\textsuperscript{15} Polnoe sobranie zakonov \ 3rd coll., no. 10709, mn. Gos. Sov. IV, article 1.
\textsuperscript{16} Far reaching changes in the peasantry's legal position were instituted only in 1906, when the Stolypin land programme relaxed restrictions on movement and permitted individuals to choose their place of residence. "Ob omene nekotorykh ogranichenii v pravakh selskikh obyvatelei i lits byvshikh podatnykh sostoianii," in Vysochaishii Ukaz 5 okt., 1906 g., St. Petersburg: 1910, pp.9 ff.
\textsuperscript{17} These figures are calculated from census statistics; for 1872 Obzor Tulskoi Gubernii za 1872 god, Tula: 1873; for 1902 Obzor Tulskoi Gubernii za 1902 god, Tula: 1902.
\end{footnotes}
from their native villages for a stated period of three months, six months, one year, or five years.18

Passports were issued by the volost administration to those who presented certification (udostoverenie) from the elder of their village.19 Until 1894, the decision to issue or deny a passport was largely a matter of local discretion20 and, on the whole, the local officials seem not to have applied the law in a restrictive way. The revised Passport Statute of that year required the village elder to determine whether the departing peasant was in arrears in his taxes or redemption payments, had the permission of his parent or the head of his household, or was leaving dependants behind in the village. Peasants who were in arrears were guaranteed a one-year passport by the revised regulations, but after that the village administration was empowered to deny renewal unless all monetary obligations were met.21

Statistics on passports issued to peasants for the whole of Russia provide information on the migration of peasants in search of paid employment. The statistics do not, however, reveal accurately the number of individuals who left their villages each year. This is because some peasants might have taken out more than one passport in a given year, and because some families might have travelled on one passport. Nevertheless, the data reveal a large and growing volume of otkhod from villages during the period 1860-1913. An

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18 The five year passport booklet (pasportnaja knizhka) could be issued only to those who paid their taxes in full, and was validated year by year by the payment of all tax obligations entered in its pages. The short term passport made no such requirement, and was preferred by the vast majority of peasants.
19 Polnoe sobranie zakonov 2nd coll. no. 36657 (Obshchee polozhenie o kr-akh, 19 February 1861), articles, 58 (par. 10), 84 (par. 8); no. 37431 (21 September 1861).
21 Polnoe sobranie zakonov 3rd coll., no. 10709 (Polozhenie o vidakh na zhitelstvo, 3 June 1894), articles 44, 49.
average of 1.29 million passports were issued between 1860 and 1870, while in the next decade the figure jumped to 3.69 million. The rate of increase slowed down during the 1880s (4.94 million), but during the 1890s the average number of passports issued annually climbed to 6.95 million. Between 1901 and 1910 around 8.87 million were issued annually. At the beginning of the twentieth century a small cluster of provinces, namely, Moscow, Tver, Kaluga, Vladimir, Riazan, Tambov, and Tula accounted for a large number of passports.  

It would be wrong to conclude from this summary that the Russian government was trying to discourage peasants from working in the cities and factories. Indeed, other legislative measures at the time seem likely to have promoted otkhodnichestvo and helped factory owners to recruit and keep workers from the countryside. If the laws were inconsistent and their net effects unfavourable for industrial growth, this was probably because the legislators were preoccupied with other issues. For the present discussion, the most important point is that the laws mentioned above forced peasants to retain at least a nominal tie to the village land commune. In the remainder of the present chapter an attempt will be made to determine more precisely how important, or how nominal, was that tie in industrial Tula at the turn of the century.

23 In 1861, village assemblies were given the power to compel tax-defaulters to work elsewhere for wages, which would then be paid directly to the village treasury (no. 36657, article 183, par. 3; 36659, article 133, par. 3; also no. 53678 (27 June 1874), article 11. Under later legislation, employers could apply on behalf of their workers for renewal of passports Polnoe sobranie zakonov 3rd coll., no. 3769 (3 June 1886), mn. Gos. Sov., article 3-4, and arrange to pay part of their wages directly to village authorities Polnoe sobranie zakonov 3rd coll., no. 11702 (22 May 1895).
Patterns of migration, 1880-1900

The high proportion of peasant migrants in the population of Tula city has been alluded to above. Before an attempt is made to describe these individuals' ties to the city and countryside, it will be useful to examine more closely the statistics on migration to the city and surrounding province.

In 1900, just over one quarter of the population of Tula city had been born there, the remaining 74.4 per cent having migrated to the city from other places. According to the census statisticians, deaths in the city had actually outnumbered births for most of the previous quarter-century, so that very little of the city's extremely rapid growth, as Graph 3-1 indicates, could be attributed to natural increase. Furthermore, whilst other surrounding provincial cities experienced increased population growth to varying degrees from the mid-nineteenth century as Graph 3-1 illustrates, none matched the scale of Tula's, particularly the dramatic escalation experienced during the 1880s. Tula's location and its industries were the focus of this population growth. The great majority of migrants were members of the peasant soslovie and were drawn from a narrow radius of surrounding provinces.

24 Throughout the following study the Russian word prishliyi will be translated as "migrant." This is an inexact rendition, chosen only because the alternatives were even less satisfactory. In the sense in which turn of the century Russian statisticians used the word, however, it meant anyone residing in a particular city or uezd who had been born outside the unit's boundaries. "Outsiders" might be a closer translation, but its meanings could lead to confusion. "Migrant" on the other hand refers clearly to geographical resettlement. The only problem with this term is that it connotes a movement of population over great distances, whereas many of the "migrants" we will be discussing had travelled only a few miles from their place of birth.

25 Pamiatnayia knizhka Tulskoi Gubernii na na 1900 g. part. 4, p.57.
Graph 3-1: Population growth of Provincial Cities, 1850-1900

Upon a closer inspection of migrants' birthplaces, it can be ascertained that the majority fell within an even smaller radius, comprising those uezdy which were closest to Tula. At least three-fifths of the city's migrant population and three quarters of its factory workers had been born within 100 miles of the city.²⁷ Even so, this radius was probably wider than it had been in the past: a comparison of the 1900 census with earlier ones suggests the proportion of migrants from more distant provinces was increasing rather sharply over time.²⁸ Nonetheless, the same pattern of migration is found in other provinces which surrounded Tula; thirty-two per cent of Riazan's migrants came from the easternmost district of that province, and sixty-seven per cent of Orel's migrants came from four northwestern uezdy.²⁹

The chief motive for coming to Tula was to seek employment. The migrants to the area tended to be able-bodied, while those who were in any way disabled, young, or infirm, and thus incapable of supporting themselves, tended to remain in the countryside. Young children and old people were conspicuously absent from the city's migrant population and, according to the municipal census of 1882, fully eighty-three per cent of all migrants residing there were self-supporting (samodeiatelnye).³⁰ Judging from the 1900 municipal census statistics, which give a more detailed breakdown of migrants' place of origin, the greatest numbers of migrants came to the city from

²⁷ Pamiatnaia knizhka Tulskoi Gubernii na 1900 g. part. 4, p.61. Obzor Tulskoi Gubernii za 1900 g. Tula: 1901, p.16. In contrast to Tula, St. Petersburg attracted migrants from a much wider radius. In 1869, twenty-two per cent of that city's migrant population had come from Iaroslavl province alone, a distance of some 400 miles. A.G. Rashin, Naselenie Rossii za 100 let, p.77.
²⁸ Pamiatnaia knizhka Tulskoi Gubernii na 1900 g. part. 4, p.61. Obzor Tulskoi Gubernii za 1900 g. Tula: 1901, p.16.
regions where industry was less developed. Of the six adjacent provinces, Orel, which far surpassed its neighbours in industrial output, supplied the smallest number of migrants, while Voronezh, Tambov, Kursk and Penza, whose combined industrial output was less than half of Orel's, sent over 30,000 migrants to Tula. In Riazan province, industry and crafts were most developed in Egorevskii, Spasskii, and Kasimovskii uezdy, while migrants to Tula predominantly came from Mikhailovskii, Zaraiaikii, Riazanskii and Pronskii uezdy. Migrants, in other words, came to Tula to find something which was not available closer to home.

In a situation of expanding industrial production, it is not surprising that many migrants were attracted to factory work. In general, the proportion of migrants was significantly higher among factory workers than in the remaining segments of population. In the metal industries, eighty-four per cent of all workers were migrants, and among all factory workers in the 1900 census, ninety-two per cent were migrants.

This does not mean, of course, that all migrants worked in factories. In fact, only about twelve per cent of all migrants did so. For the rest, Tula's chief attraction was still wages, but these were earned in handicrafts, construction work, commercial and service occupations, and so on. The larger population of non-factory migrants was subject to many of the same stresses as factory workers, namely, long hours, low wages, and overcrowding in unhygienic conditions. In terms of soslovie and place of birth, the factory and non-factory migrant population were virtually identical. For these reasons census

31 Pamiatnaia knizhka Tulskoi Gubernii na 1900 g. part. 4, table V, pp.40-42.
data on the entire migrant population can often be used to illuminate the details of factory workers' lives.

In the overall pattern of migration, Tula city should perhaps be pictured as a magnet with a force of attraction extending in all directions. Migrants from the surrounding provinces moved towards the city, sometimes stopping before they reached Tula or at other times moving beyond the city and onwards to Moscow or even St. Petersburg. In Kolomenskii uezd, Moscow province, for example, forty-seven per cent of the work force was recruited from nearby provinces of Riazan and Tula, and only 5.8 per cent from all others. In Serpukhovskii uezd, most migrants came from Tula and Kaluga.33

According to a popular stereotype of the period, Russian workers regarded industrial employment as a supplement to their agricultural earnings, and returned home each summer to work their fields.34 As early as 1880, however, V. Smidovich's study of Tula metalworkers suggested that this was not always the case. Of 4,199 workers of peasant origin, roughly one quarter or a total of 1014 stayed year round at the factories. The proportion working year round was much higher for certain categories of work, especially those which involved "mechanised" production, such as the operation of an iron foundry (forty-three per cent year round). Auxiliary work in "mechanised" enterprises, both skilled (such as carpenters, sixty per cent) and unskilled (45.3 per cent), also had higher proportions of workers remaining through the summer.35

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33 Sbornik statisticheskikh svedenii po Moskovskoi gubernii... vol. III, no. 13, p.38.
34 See, for example, the remarks of Chief Factory Inspector Ia. T. Mikhailovskii in Fabrichno-zavodskaia promyshennost i torgovlia Rossii. 2nd ed., St. Petersburg: 1895.
Statistics compiled by the factory inspectorate for the Russian Department of Trade and Manufacture in 1893 show a similar pattern to Smidovich's figures, however, the proportion of departing workers in the later figures is significantly lower. Of all the workers at 1263 factories in the Moscow industrial district in the years 1882 to 1893, only 18.36 per cent departed for summer work in agriculture. Although these figures do not distinguish manual from mechanised labour, the trend toward year round operation in large-scale enterprises is clear.

In the manufacturing industry, by the end of the nineteenth century, enterprises tended to operate continuously, rather than to cease operations during the summer months. This tendency was established without question in a survey of factory workers, conducted by E.M. Dementev in 1893. Dementev observed that seven out of ten factory workers remained at work throughout the year. Not surprisingly, the percentage was greatest where entrepreneurs had installed machinery that they could not afford to leave idle during normal trade conditions. Thus, only one in ten workers in the engineering industry and fewer than two out of ten in the textiles industry returned to the village for field work. In food and drink enterprises, however, a majority of workers left for the villages each year with at least six out of ten doing so on average. Among workers in the construction industry, few would return to the village during the summer, because this was the height of the building season.37

Poor peasants, of course, had no cause to leave their place of work and return to the village at harvest time because after all, it was

36 The district included Moscow, Tver, Tula, Riazan, Kaluga, and Smolensk provinces.
the lack of adequate arable land that had driven them away from the village in the first place. A.G. Rashin cites two surveys of migrant workers who gained an income from "trades" (promysly). These migrants had little or no land at their disposal and remained "abroad" for twelve months or more. Their dependants stayed behind in the village and, to that extent, poor peasants retained a link with the community. Family members were forced to stay in the village, because the breadwinner could not support them in the expensive urban environment. Seasonal interruptions to non-agricultural work were reduced by the fact that poor peasants had no incentive to return to their villages at harvest time. Another factor that operated in the same direction was the need on the part of management to ensure that workers did not leave during the summer and disrupt the production schedule.

The decision to work through the summer was, of course, not made by the workers, but by employers, who could not afford to leave expensive facilities standing idle. Through a combination of incentives and coercive measures, factory owners and managers sought to secure a stable year round work force. Workers' contracts customarily began at Easter and were either of six months' or one year's duration. Employers often reserved the right to lower wages or otherwise alter working conditions in the autumn. Workers who broke their contract in the summer months were often obliged to

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39 I. Ianzhul, Iz vospominanii i perepiski fabrichnogo inspektora pervogo prizyva: Materialy dlia istorii Russkogo rabochego voprosa i fabrichnogo zakonodatelstva. St. Petersburg: 1907, p.82.
40 I. Ianzhul, Iz vospominanii i perepiski fabrichnogo inspektora pervogo prizyva: p.82.
forfeit several weeks' or months' wages, although those who quit their jobs during winter months faced lighter penalties.\textsuperscript{41}

Another common practice was to pay wages only a few times a year, and to pay them in arrears, so that, for example, July's might not be received until mid-August. By the time the relevant pay-day arrived, workers were several weeks into the new pay period, and if they left they would not receive all that was due to them. Another example is found in the "rules of internal order" which existed at the Batashev foundry (Tula) and which contained the provision that a minimum of two weeks' salary must be withheld at all times from workers' wages.\textsuperscript{42} One factory investigated by Factory Inspector I. Ianzhul in 1883 withheld ten per cent of all wages between October and Easter, and paid the sum only to workers who "re-enlisted" for the summer term.\textsuperscript{43} In the long interval between pay-days, workers were allowed to buy goods on credit from factory owned stores, and were thereby even more tightly bound to their jobs by indebtedness. In at least one case, in the early 1880s, the worker indebtedness was so great that money wages were never seen at all by the workers.\textsuperscript{44} Such abuses were reduced but not wholly eliminated by the Factory Law of June 3, 1886. Fines imposed by employers, factory stores, and the mechanics of hiring, firing, and wage payments were major areas affected by this legislation.\textsuperscript{45}

\textsuperscript{41} I. Ianzhul, \textit{Iz vospominanii i perеписки fabrichnogo inspektora pervogo prizyva}: p.86.
\textsuperscript{42} GATO fond 46 opis 2 delo 1472.
\textsuperscript{43} I. Ianzhul, \textit{Iz vospominanii i perеписки fabrichnogo inspektora pervogo prizyva}: p.87.
\textsuperscript{44} I. Ianzhul, \textit{Iz vospominanii i perеписки fabrichnogo inspektora pervogo prizyva}: p.88.
\textsuperscript{45} For a detailed description see M.I. Tugan-Baranovskii, \textit{The Russian Factory in the 19th Century} p.229.
In other instances employers refused, albeit illegally, to return the passports of workers who wished to depart, seeking thereby to restrict their movement. Other employers established a system of mutual guarantees (krugovaia poruka), under which each worker had to be vouched for by another, who would pay a penalty if he left. Factories were also known to operate on a single shift in the summer months and revert to an around the clock, two-shift system in the autumn. Still another way of compensating for a shortage of workers in summer was to require each worker to tend several machines.

All of these measures had the direct or indirect effect of binding the workers to their jobs. Most were directed specifically at summer departures, that is, at departures for agricultural work rather than movement from one factory to another. The fact that many employers considered such measures necessary suggests that workers had not fully accepted the idea of year-round employment, and that many engaged in it unwillingly.46

Workers' economic ties to the countryside

Although year-round employment away from the native village was a major change in peasants' life patterns, the practice of otkhodnichestvo or temporary, rather than permanent, departure in search of wages persisted.47 Studies of individual factories suggest the great majority of workers in the Tula region retained land allotments which were either tended by relatives or leased to other peasants.

46 One exception noted by Smidovich was the metalworking industry, whose higher wages seem to have been incentive enough to keep workers from departing. V. Smidovich, Materialy dlia opisaniiia g. Tuly. p.29.
47 For indications that the pattern of otkhodnichestvo continued in some parts of Russia as late as the 1950s, see Stephen and Ethel Dunn, The Peasants of Central Russia Rinehart and Winston, New York: 1967, pp.81-85.
The most complete set of data on Tula workers' ties to the land was compiled at the Tula cartridge factory in 1899, where seventy-five per cent of all male workers were individually questioned about their holdings. Of 1335 peasants, just over ninety per cent possessed a land allotment, and of the remaining ten per cent, more than three-quarters were from families who received no land at the time of Emancipation.  

The question arises as to the significance of the stakes held in land allotments by the workers. Moreover, were they burdens carried unwillingly because of the legal restrictions described above? The results of the cartridge factory's study suggest several answers to these questions. 

In the first place, only sixty-four per cent of respondents were able to supply detailed information about the size of their landholdings. Absent from the countryside for several years, they had not kept track of changes in the household allotment. However, they were much better informed about family livestock, with only one of the workers queried unable to give an exact answer on this point. Livestock, as Lenin and subsequent Marxist investigators appreciated, was an important indicator of a family's well-being, for without it even a better than average land allotment could not be worked. 

The workers' responses reveal a substantial proportion of those with land had no livestock whatsoever (22.7 per cent). Fully 37.2 per

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48 A.A. Korolev, "Finansovo-ekonomicheskaia deiatelnost Tulskogo patronnogo zavoda v kontse XIX-nachale XX vv. [1899-1907 gg.]," in Iz Istorii Tulskogo Kraia. Tula: 1972, p.26. It should be noted that the cartridge workers were not, in the main, short-term workers newly arrived from the countryside; they had spent an average of 10.3 years in factory employment.


50 A.A. Korolev, "Finansovo-ekonomicheskaia deiatelnost Tulskogo patronnogo zavoda..." p.28.
cent of all respondents reported their families were without a horse with the figures ranging from 62.7 per cent (Kashirskii uezd, Tula province) to 19.7 per cent (Odoevskii uezd, Tula province). On the other hand, 37.1 per cent of respondents counted two or more horses in their households. As for cows, 24.8 per cent of all respondents had none, but 23.2 per cent had two or more.

These percentages suggest that although a large proportion of workers was recruited from the most impoverished stratum of the peasantry, that is, from a group whose ties to agriculture were the most tenuous, another large contingent came from the more prosperous "middle peasantry" and kept, through their families, an active interest in agriculture.

The results of local government (zemstva) surveys are enlightening as they enquired in detail into a broadly representative sample of households, and asked questions about each of those household’s access to land, livestock and non-family labour, if any. They itemised the components of peasant income and expenditure, in cash and in kind. Finally, they grouped the households according to a chosen indicator, usually allotment land or the number of horses owned. In this way, the investigators were able to depict the stratification of the peasantry in any given village at any given moment.

52 These investigations about the internal organisation of peasant households were gathered and published by the zemstva, local authorities that the tsarist regime established in most rural areas in 1864. Initially, their efforts at data collection had a fiscal purpose, but they gradually assumed another character, as the zemstva statisticians sought to uncover the nature of peasant society in post-reform Russia. By 1892 more than 120 districts had been covered, comprising around three million households in all. Dozens of surveys of individual districts were published before 1917.
These *zemstvo* investigations, in the form of budget studies, depicted a society that was far removed from the image of an egalitarian and homogeneous peasantry. One of the most well-known surveys, conducted in Voronezh province in 1887-1896 by F.A. Shcherbina, indicated that the gross income of the poorest households (those that sowed no allotment land and those sowing less than five *desiatiny*) amounted to no more than two-thirds of the per capita income of the wealthiest category. The net income of the “landless” households, again in per capita terms, came to just over one-tenth of the net income of the wealthiest, although the differential was less extreme in the case of those households that sowed up to five *desiatiny*. Furthermore, the wealthiest households (those with more than twenty-five *desiatiny*) were able to set aside a much higher proportion of their income for expenditure on the farm, rather than on the personal needs of family members.  

Data on the cartridge workers' landholdings are, as noted above, less complete. Of 780 workers who were able to supply information about their holdings, 79.3 per cent held less than one *desiatina* for each member of their family, and only 3.4 per cent more than two *desiatiny*. The overall average was 0.57 *desiatiny* per person. When these figures were compared with average allotments in the workers' native *gubernii*, they turned out to be between thirty-two to fifty-nine per cent below the regional averages.

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54 Families, as we will see later on, were large. The 1318 workers in the cartridge factory study had a total of 9725 persons in their households, of whom 5605 were able to work. A.A. Korolev, “Finansovo-ekonomicheskaya deiatel’nost Tul’skogo patronnogo zavoda...” p.37.
56 A.A. Korolev, “Finansovo-ekonomicheskaya deiatel’nost Tul’skogo patronnogo zavoda...” p.35.
These figures support the suggestion that social differentiation in the countryside was forcing the poorest peasants off the land and into the factories. Data on the disposition of land suggests, however, that the great majority of workers retained an active interest in agriculture. Only 0.5 per cent left their lands idle, and 14.3 per cent rented them out to other peasants. The remaining eighty-five per cent left their allotment in the care of relatives, and 7.3 per cent of these hired labourers to assist them.\(^{57}\) In Tver_gubernia_ almost ten per cent of peasant farmers were landless, Kostroma had 9.05 per cent, Pskov had 3.26 per cent, Riazan had 3.56 per cent and Nizhni Novgorod had 11.57 per cent. Historians have noted that in regions with industry there were usually large numbers of deserted holdings (otsutstvuiushchikh dvorov). In seven uezdy of Tver_gubernia_, for example, during the 1880s, 5.9 per cent of farm holdings were deserted; by 1911 this number had jumped to 16.3 per cent in one uezd and 19.8 per cent and 21.3 per cent in two other uezdy.\(^{58}\)

In sum, although the cartridge workers rarely took an active role in the working of their lands and were often uninformed about changes in their allotments, their ties to agriculture seem more than just a legal formality. Data from another source, though less complete, supports this conclusion. Results of a survey carried out by the Moscow Factory Inspectorate in 1893, covering seven Tula factories which employed a total of 2015 male workers, found that 23.5 per cent of these workers retained allotments and departed in the summer to work them. A further 51.2 per cent had turned their allotments over

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\(^{57}\) A.A. Korolev, “Finansovo-ekonomicheskaia deiatelnost Tulskogo patronnogo zavoda...” p.38.

to relatives or rented them out to others. Unfortunately, the source does not indicate what proportion of workers fell into each of these two categories. A more detailed breakdown is given for only one of the factories, the Nosov broadcloth factory. Of 220 year-round workers who retained land allotments, seventy per cent had left them to be worked by relatives, 21.4 per cent had leased them back to the village, and 8.6 per cent had rented them to others.59

These data suggest that, despite differences of degree, the cartridge factory workers were not atypical in maintaining close ties with the countryside despite prolonged absences. Although an increasing proportion of all workers was moving permanently away from the village, the majority's ties could not be characterised merely as a legal formality.

Duration of migration to the cities

In his study of urbanisation in Germany, Wolfgang Köllmann spoke of internal migration as the mechanism by which an agrarian order in crisis was restored to balance and the industrial work force and urban centres were strengthened. The village, he argued, was relieved of overpopulation pressure and stability and security were maintained as if there were no population crisis.60 At the same time, those entering into urban society found a flexible social situation still in the formative process; a society with true opportunities for social betterment.61 But, most importantly, Köllmann wrote:

59 Rabochee dvizhenie v Rossii v XIX veke, vol. III Ch. 2, pp.592-593.
Socially, migration from country to town almost always meant divorce from the agrarian structure and integration into an artisan-industrial order.\textsuperscript{62}

In contrast, we have the Russian peasant who was left suspended somewhere between village and city. The Russian government had institutionalised these dualities by legally forcing the peasantry to remain tied to the village.

If workers were unenthusiastic about remaining at the factory all year-round, and if many retained ties to the countryside through land, family and remittances, we would expect to find a pattern of reverse migration, of migrants leaving the cities and factories to return to their native villages. On the other hand, if migrants were putting down permanent roots in the city there would be no reason for such reverse migration to occur. The question of how long the migrants stayed is thus fraught with broader implications for the history of the Russian working class. Census data and factory studies permit at least a partial answer to this question. The city censuses of 1880 and 1900 form the central evidence for this discussion. The information they contain on in-migration and out-migration, broken down by soslovie, age, and gender are utilised on the basis of consistency and, at the very least, comparable accuracy.

In conjunction with the census evidence studies carried out in both Tula city and the surrounding province in approximately 1880 appear to show a permanent assimilation of migrants into urban and industrial life. The aforementioned survey of factory conditions throughout the province, carried out by Smidovich between 1879 and 1880, determined that one-fifth of all workers had spent twenty-five

\textsuperscript{62} Wolfgang Köllmann, “The Process of Urbanization in Germany at the Height of the Industrialization Period,” p.70.
years or more at the factory. In a similar study carried out by the Factory Inspectorate in Tula, many of the workers who were interviewed had spent so many years at the factory that they had lost track of the exact number. By the seventies and eighties the great majority of passport requests issued were for yearlong duration in the central guberni. By the late nineties, family passport requests in Yaroslavl guberniia had risen to 15,014 (from 9389 in 1879), and the average length of departure for peasants was 10.9 years. During this same period two thirds of the 300,000 otkhodniki from Moscow guberniia stayed away a full year even though most were within 160 kilometres of their homes. By 1892, 89.22 per cent of the St. Petersburg work force were full time, year-round workers.

It would be incorrect, however, to conclude from this evidence that most workers never departed from the factory, or that they had severed all meaningful ties to the village. In some of the more traditional branches of industry, workers with many years' experience at the factories continued to travel back to the native village every summer, and to return to the factory in autumn.

Even those who worked all year-round in factories were able to return to the countryside periodically, usually at holiday times. Accounts of factory life suggest that this was a routine procedure. Smidovich, for example, describes a type of cart which was used to

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63 V. Smidovich, Materialy dla opisaniia g. Tuly. p.28.
64 I. Ianzhul, Iz vospominanii i perepis' fabrichnogo inspektora pervogo prizyva: p.95.
65 L.E. Mints, Otkhod kreftianskogo naseleniia na zarabotki v SSSR Moscow: 1929, p.29.
provide low cost transportation to workers returning home at Easter.\textsuperscript{69} In some areas, workers who made such a journey were expected to bring back "gifts" of produce for their foremen, and were punished for failing to do so.\textsuperscript{70}

Other sources describe workers as returning to their native villages because of unemployment, age, and infirmity. In 1885, a bad year for the textile industry, zemstvo statisticians in Moscow gubernia noted many workers who had lost their jobs were returning to the countryside, even though they were no longer accustomed to agricultural work.\textsuperscript{71} Precise statistics on such movement are unavailable. Similarly, factory doctors are quoted as complaining that ill workers often returned to the village instead of seeking care in the infirmary, but comprehensive figures were not gathered.\textsuperscript{72}

If a significant proportion of factory workers retained close ties to the village, and returned there in time of need, we would expect this fact to be reflected in statistics on turnover in the industrial workforce. Unfortunately, the industrial studies noted above do not include such statistics. However, overall census data can be used instead to trace departures from the city of Tula. Although these data do not refer specifically to factory workers or other occupational groups, they do clearly identify migrants and peasants, the groups from which most Tula factory workers were drawn. The remainder of the present chapter will focus on material from two municipal censuses of Tula, taken in 1880 and 1900, in order to determine how long peasant migrants tended to reside there and whether or not their

\textsuperscript{69} V. Smidovich, Materialy dlia opisaniiia g. Tuly. p.30.
\textsuperscript{70} K.A. Pazhitnov, Polozhenie rabocheho klassa v Rossii, St. Petersburg: 1906, pp.179-180.
\textsuperscript{71} Statisticheskii ezhegodnik Moskovskoi gubernii za 1885 g. Moscow: 1886, pp.78-79, 128.
\textsuperscript{72} F.P. Pavlov, Za desiat let praktiki Moscow: 1901, p.70.
stays were permanent. The overall pattern of movement into and away from the city is first considered and then the statistics relating to specific groups within the population are examined.

Table 3-1: Migrants residing in the city of Tula, 1880 and 1900, by duration of residence

<table>
<thead>
<tr>
<th>Number of years' residence</th>
<th>1880</th>
<th>1900</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>As % of one year's immigration</td>
</tr>
<tr>
<td>Less than one year</td>
<td>6,283</td>
<td>--</td>
</tr>
<tr>
<td>One year</td>
<td>2,729</td>
<td>43%</td>
</tr>
<tr>
<td>Two years</td>
<td>2,526</td>
<td>40%</td>
</tr>
<tr>
<td>Three to five years</td>
<td>4,760</td>
<td>25%</td>
</tr>
<tr>
<td>(yearly average)</td>
<td>1,586</td>
<td>25%</td>
</tr>
<tr>
<td>Six to ten years</td>
<td>5,475</td>
<td>17%</td>
</tr>
<tr>
<td>(yearly average)</td>
<td>1,095</td>
<td>17%</td>
</tr>
<tr>
<td>Eleven to fifteen years</td>
<td>3,835</td>
<td>12%</td>
</tr>
<tr>
<td>(yearly average)</td>
<td>767</td>
<td>12%</td>
</tr>
<tr>
<td>Sixteen to twenty years</td>
<td>2,602</td>
<td>8%</td>
</tr>
<tr>
<td>(yearly average)</td>
<td>520</td>
<td>8%</td>
</tr>
<tr>
<td>More than twenty years</td>
<td>5,495</td>
<td>--</td>
</tr>
<tr>
<td>Total migrant population</td>
<td>36,824</td>
<td></td>
</tr>
<tr>
<td>of whom, ages 20 and above</td>
<td>6,142</td>
<td>9,282</td>
</tr>
</tbody>
</table>


A crude estimate of movement away from Tula can be obtained by comparing the annual influx of migrants with the overall increase in the city's population. Of all persons counted in the 1880 census, 6,283 or thirteen per cent, had arrived in the city during the preceding

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73 Excludes foreigners.
74 Includes "unknown duration" (3,119 in 1880, 5,274 in 1900).
year. The comparable figure in 1900 was over 7,000 or just under ten per cent of the city population. Statisticians estimated Tula’s overall population growth in the years preceding both censuses at roughly 3,000 persons or 0.89 per cent per annum. This figure included both natural increase (births exceeded deaths by 531 per annum in the years 1897 to 1900) and net increase through migration (estimated at 2,500). If more than 7,000 persons moved to Tula in 1900 and the net population growth was 3,000, then some 4,000 persons must have moved away from the city in that year.

Precisely who were these 4,000? The census results suggest that many were migrants who had lived in Tula for only a few years. Table 3-2 lists the duration of residence of all migrants counted in the censuses of 1880 and 1900. If we suppose that the influx of migrants in 1899 was typical of other years and that approximately the same number moved to the city in 1898, 1897, and so forth, then the top line of the table can be compared with each successive line to determine the rate of out-migration. In other words, if 7,000 migrants moved to Tula in 1898, more than half that group was no longer in the city by 1900. If the influx was the same in 1895, only thirty-seven per cent of that group was still in Tula in 1900.

Because the two censuses were taken exactly twenty years apart, a further computation of out-migration is possible. The total migration population of 1880 can be compared with the "more than twenty years' residence" group of 1900. Of 36,824 migrants residing in Tula in the earlier year, 8,394 or twenty-three per cent remained in 1900. When this decrease is averaged over twenty years, the annual rate of decrease is found to be 3.7 per cent. A similar calculation can be performed for the Tula born population. The 1880 census counted 6,142 persons as native-born Tularites. Over thirty-eight per cent of
this group was still residing in the city twenty years later (counted in the 1900 census as "Tula born, aged twenty and above"). Although part of the decrease in both groups was due to mortality, we can conclude that many individuals moved away from Tula, and that those who had been born elsewhere were more likely to leave.

Moreover, we can determine more precisely who was entering and leaving Tula by comparing figures for different soslovia. Table 3-2 shows the duration of residence of peasant and non-peasant migrants counted in the 1900 Tula census.

Table 3-2: Duration of residence of migrants in Tula in 1900, by soslovia (in percentages)

<table>
<thead>
<tr>
<th>Years of residence</th>
<th>Peasants</th>
<th>Other Unprivileged</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year or less</td>
<td>22.3%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Two years</td>
<td>7.6%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Three to five years</td>
<td>16.6%</td>
<td>12.0%</td>
</tr>
<tr>
<td>Six to ten years</td>
<td>17.9%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Eleven to fifteen years</td>
<td>11.1%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Sixteen to twenty years</td>
<td>9.8%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Twenty-one years and longer</td>
<td>14.5%</td>
<td>31.5%</td>
</tr>
<tr>
<td></td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>


The proportion of peasants with one year or less of residence was half again as great as that of other unprivileged soslovia, that is, meshchane and tsekhovye, "burghers" and "artisans," the groups whose working and living conditions most closely resembled those of peasant migrants. This pattern was reversed in the "over twenty

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75 Includes meshchane, tsekhovye, and "other unprivileged."
years" group, which included 14.5 per cent of all peasant migrants but thirty-one per cent of migrants of other unprivileged sosloviia. Evidently peasants who moved to Tula were more likely than non-peasants to move away.

The above figures provide a number of clues as to the patterns of out-migration from Tula. However, although they suggest that many peasants who migrated to Tula did not remain there permanently, they do not indicate precisely where the out-migrants went when they left Tula. Did they return to the village or continue to work in other industrial centres? This question can be answered indirectly if we can determine the age breakdown of out-migrants. If they were mostly young and able-bodied, we might reasonably suppose that they were going to work elsewhere. If they were older, their chances of finding work in other localities would be smaller, and the likelihood that they were returning to the countryside greater.

Once again, existing statistical sources do not provide a direct answer to the question. No figures were compiled on out-migration. The published census results of 1880 and 1900 did, however, provide a detailed breakdown of Tula's population by age, and these figures are summarised in Table 3-3.
Table 3-3: Age distribution of males in the city of Tula

<table>
<thead>
<tr>
<th>Age</th>
<th>Peasants</th>
<th>Total</th>
<th>All others</th>
<th>Peasants</th>
<th>Total</th>
<th>All others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>of whom</td>
<td></td>
<td>meshchane</td>
<td></td>
<td></td>
<td>meshchane</td>
</tr>
<tr>
<td>0-4 total</td>
<td>459</td>
<td>960</td>
<td>368</td>
<td>1,508</td>
<td>1,019</td>
<td>622</td>
</tr>
<tr>
<td>%</td>
<td>2.9</td>
<td>8.4</td>
<td>8.4</td>
<td>5.8</td>
<td>9.7</td>
<td>10.5</td>
</tr>
<tr>
<td>5-9 total</td>
<td>344</td>
<td>851</td>
<td>327</td>
<td>1,037</td>
<td>857</td>
<td>482</td>
</tr>
<tr>
<td>%</td>
<td>2.2</td>
<td>7.5</td>
<td>7.5</td>
<td>3.8</td>
<td>8.1</td>
<td>8.2</td>
</tr>
<tr>
<td>10-14 total</td>
<td>1,494</td>
<td>1,020</td>
<td>408</td>
<td>1,684</td>
<td>931</td>
<td>516</td>
</tr>
<tr>
<td>%</td>
<td>9.6</td>
<td>8.9</td>
<td>9.3</td>
<td>6.2</td>
<td>8.8</td>
<td>8.7</td>
</tr>
<tr>
<td>15-19 total</td>
<td>2,583</td>
<td>1,200</td>
<td>512</td>
<td>4,088</td>
<td>1,151</td>
<td>648</td>
</tr>
<tr>
<td>%</td>
<td>16.2</td>
<td>10.2</td>
<td>11.7</td>
<td>14.9</td>
<td>10.9</td>
<td>11.0</td>
</tr>
<tr>
<td>20-24 total</td>
<td>2,786</td>
<td>1,120</td>
<td>545</td>
<td>4,485</td>
<td>1,226</td>
<td>703</td>
</tr>
<tr>
<td>%</td>
<td>17.8</td>
<td>9.8</td>
<td>12.4</td>
<td>16.4</td>
<td>11.7</td>
<td>11.9</td>
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<td>2,333</td>
<td>1,058</td>
<td>428</td>
<td>4,239</td>
<td>1,104</td>
<td>644</td>
</tr>
<tr>
<td>%</td>
<td>14.9</td>
<td>9.3</td>
<td>9.8</td>
<td>15.5</td>
<td>10.5</td>
<td>10.9</td>
</tr>
<tr>
<td>30-34 total</td>
<td>1,725</td>
<td>935</td>
<td>370</td>
<td>5,429</td>
<td>1,756</td>
<td>1,009 (30-39)</td>
</tr>
<tr>
<td>%</td>
<td>11.0</td>
<td>8.2</td>
<td>8.4</td>
<td>19.9</td>
<td>16.7</td>
<td>17.0</td>
</tr>
<tr>
<td>35-39 total</td>
<td>1,331</td>
<td>906</td>
<td>315</td>
<td>1,996</td>
<td>1,196</td>
<td>643 (40-49)</td>
</tr>
<tr>
<td>%</td>
<td>8.5</td>
<td>7.9</td>
<td>7.1</td>
<td>11.3</td>
<td>11.4</td>
<td>10.9</td>
</tr>
<tr>
<td>40-44 total</td>
<td>855</td>
<td>787</td>
<td>274</td>
<td>3,078</td>
<td>1,196</td>
<td>643 (40-49)</td>
</tr>
<tr>
<td>%</td>
<td>5.5</td>
<td>6.9</td>
<td>6.2</td>
<td>11.3</td>
<td>11.4</td>
<td>10.9</td>
</tr>
<tr>
<td>45-49 total</td>
<td>639</td>
<td>723</td>
<td>231</td>
<td>1,219</td>
<td>702</td>
<td>358 (50-59)</td>
</tr>
<tr>
<td>%</td>
<td>4.1</td>
<td>6.3</td>
<td>5.8</td>
<td>4.5</td>
<td>6.7</td>
<td>6.1</td>
</tr>
<tr>
<td>50-54 total</td>
<td>438</td>
<td>655</td>
<td>202</td>
<td>1,219</td>
<td>702</td>
<td>358 (50-59)</td>
</tr>
<tr>
<td>%</td>
<td>2.8</td>
<td>5.7</td>
<td>4.6</td>
<td>4.5</td>
<td>6.7</td>
<td>6.1</td>
</tr>
<tr>
<td>55-59 total</td>
<td>295</td>
<td>453</td>
<td>149</td>
<td>149</td>
<td>149</td>
<td>149</td>
</tr>
<tr>
<td>%</td>
<td>1.9</td>
<td>4.0</td>
<td>3.4</td>
<td>4.5</td>
<td>6.7</td>
<td>6.1</td>
</tr>
<tr>
<td>60-64 total</td>
<td>188</td>
<td>350</td>
<td>122</td>
<td>463</td>
<td>548</td>
<td>283 (60 and over)</td>
</tr>
<tr>
<td>%</td>
<td>1.2</td>
<td>3.1</td>
<td>2.7</td>
<td>1.7</td>
<td>5.2</td>
<td>4.8</td>
</tr>
<tr>
<td>65-69 total</td>
<td>68</td>
<td>163</td>
<td>56</td>
<td>44</td>
<td>14</td>
<td>5 (unknown)</td>
</tr>
<tr>
<td>%</td>
<td>0.4</td>
<td>1.4</td>
<td>1.3</td>
<td>0.2</td>
<td>0.1</td>
<td>0.07</td>
</tr>
<tr>
<td>70 and over total</td>
<td>50</td>
<td>168</td>
<td>63</td>
<td>0.2</td>
<td>0.1</td>
<td>0.07</td>
</tr>
</tbody>
</table>
We find that in 1880 the proportion of peasant males aged 50 to 59 was just half that of other *soslovia* and in the age group 60 and over it was less the one-third. In 1900, differences between peasant males aged 60 and over was still just half that of other *soslovia*.

Was this disparity caused by out-migration, or could other factors have produced the same pattern? Two such factors seem possible. The first is that a constant influx of peasant migrants in the younger age brackets would reduce the proportional weight of the older group. In other words, the low proportion of peasants over age fifty might not mean that anyone was moving away, but only that many more young peasants were constantly arriving. This possibility can be checked by following one age cohort group from the census of 1880 to 1900. Persons who were 30 to 39 years old in 1880 would have been 50 to 59 in 1900. Comparing peasant and non-peasant males of these ages in the two censuses, the following results are produced:

<table>
<thead>
<tr>
<th>Ages</th>
<th>Peasants</th>
<th>Meshchane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages 30-39, 1880</td>
<td>3,056</td>
<td>685</td>
</tr>
<tr>
<td>Ages 50-59, 1900</td>
<td>1,219</td>
<td>358</td>
</tr>
<tr>
<td>1900 as % of 1880</td>
<td>40%</td>
<td>52%</td>
</tr>
</tbody>
</table>

These figures indicate the number of persons in this age group decreased absolutely, and that the decrease was greater among peasants than among meshchane. They suggest the low proportion of peasants in the older age brackets was the result of an absolute
decrease in their numbers, rather than a relative decrease due to the influx of younger migrants. This still does not prove that out-migration by older peasants occurred. A second factor which could have produced the same age distribution was a difference in rates of mortality. Possibly the conditions under which peasants worked and lived were significantly worse than those of other city-dwellers, making the mortality rate significantly higher.

The foregoing discussion can be summarised in the following manner. A comparison of the age distribution of peasants and non-peasants show a disproportionately small number of the former in the age group forty and above. This disparity cannot fully be explained by differences in the rates of in-migration or mortality of different sosloviia. Moreover, when the comparison is restricted to persons whose living and working conditions were identical, peasants are still found to be less numerous in the older group. We are left with the impression that a significant proportion of peasants departed from Tula after age forty. It cannot be proven that they returned to their birthplaces, but this inference is consistent with evidence of workers' land-holdings and family ties to the countryside.

Until recently, most historians, both Soviet and non-Soviet, have implicitly accepted a dichotomy between village and factory, disagreeing only in the relative importance they imputed to a "progressive" proletarian or "primitive" peasant outlook. Data in the present study tend to undermine this dichotomy. A constant two-way movement between the countryside and industrial centres is suggested, a movement which was not confined to unskilled occupations but included many industrial veterans. Only a minority of the peasant population was present in the cities and factories at any given moment, but many more had been there and returned. Even
those who stayed in the factories for many years nevertheless took the opportunity to return to the countryside on a periodic basis.

Regional loyalties

The choice of where to migrate for peasants had much to do with their village and its traditions of *otkhodnichestvo*. This is because a well-developed system of *otkhodnichestvo* would often provide jobs and living arrangements through *zemliaki*. The Russian term, *zemliak*, describes a "fellow-countryman, person from [the] same district." In popular usage, this term may be applied to persons from an area as large as Siberia, yet it connotes a special kind of relationship: two Siberians living in Tula, even though their homes may be hundreds of kilometres apart, really do have something in common which sets them apart from native Tularites.

The word *zemliak* is used more often to refer to persons from a more limited area, a province, a region of a province, or even a single village. University students in Moscow and St. Petersburg in the 1880s and 1890s were organised in *zemliachestva*, associations of people from individual provinces which provided loans and mutual assistance and sometimes served as a vehicle for struggle against police and university authorities. Although close supervision by employers and police made such formal organisations a near-impossibility for factory workers, memoirs and other contemporary writings suggest that workers, too, actively sought out their *zemliaki* away from home.

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In his examination of the Moscow industrial region Robert Johnson has illustrated the enormous importance and frequency of *zemliak* ties.\(^7\) He established that *zemliak* ties formed real community bonds between the workers of Moscow. For example, Semen Kanatchikov was deposited by his father at the Gustav List Works and placed under the guidance of a *zemliak* from their same village. For Kanatchikov, "The presence of familiar faces from his village" eased the pressures of transition from rural to industrial life.\(^7\) In St. Petersburg, a *zemliak* of P. A. Moiseenko gave him a job in a weaving plant and immediately brought him into an *artel'* of *zemliaki*. Moiseenko noted that Moscow was a closer destination but that there would be more ties for him in St. Petersburg.\(^8\) By the turn of the century, *otkhodniki* knew and consciously utilised *zemliak* ties in order to establish themselves in urban or industrial settings. In other words, in most cases the image of a peasant coldly forced from the land and impersonally handed over to the urban setting was unrealistic. The journey from village and into factory was well-developed and established by *zemliaki*.

At the beginning of the twentieth century these village/city connections were fully operative. Several *uezdy* in Tula province in the mid-1890s exemplified the importance of these *zemliaki* ties. Examples include peasants from Aleksin and Kashira *uezdy* who traditionally spent the winter period labouring in factories in Serpukhov, Moscow and Tula; peasants from Tula *uezd* who worked


\(^8\) P.A. Moiseenko, *Vospominaniia starogo revoliutsionera* Moscow: 1966, pp.16-17.
almost exclusively in Tula factories especially in the armaments and cartridge works; peasants from Venev uezd who carted firewood; peasants from Odoev uezd who hauled firewood, transported ore and also worked in the armaments factory; peasants from Belev and Chern uezdy who, in addition to undertaking coal-mining activities, laboured in the sugar-refining factories in Tula and Kiev; peasants from Krapivna uezd who carted ore and worked in the armaments, cartridge and sugar-refining factories in Tula; and peasants from Bogoroditsk uezd who worked in the Bobrinskikh sugar-beet factory.

The volosty of Mashkov, Anishen, Torkhov, and Tatev in Tula uezd were centres of metalwork specialising in the locksmith trade and in consequence the armaments and cartridge factories in Tula found that their workers came from peasants who originated from Torkhov, Koptev, Tatevsk, Paslov, Zaitsev, Chastin, and Sergiev volosty Tula uezd. Plasterers and stoneworkers from Nizhni Novgorod always went to St. Petersburg. The Baltiiskii plant in St. Petersburg found that it could supply itself with strong workers from peasants who had worked in steamship construction on the Volga River. The workshops could resupply themselves because “in their turn many railroad artisans [brought] many neighbouring peasants to mechanical work.” One of the workers at the Aleksandro-Nevskaia cotton weaving plant noted that the “majority of workers” at her plant were from Kashinskii uezd of Tver guberniia.

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81 Selskokhoziaistvennyi Obzor po Tulskei Gubernii za 1895 god no. 1 Tula: 1896, pp.56-57.
82 Selskokhoziaistvennyi Obzor p.59.
83 A. Blek “Usloviia truda na Peterburgskikh zavodakh po dannym 1901 goda,” in Arkhiv istorii truda v Rossii vol. II, 1921, pp.82-83.
These regional ties not only aided peasants in finding employment. M.I. Pokrovskaya, a reformist investigator in the 1890s, demonstrated the mutual aid of *zemliaki* in a short fictional vignette. A young woman who had arrived in St. Petersburg and was trying to find her husband with little luck happened upon a drayman who discovered that she came from the same area as he. He began to call her *zemliak* and stayed with her until she found her husband. In his short story "V sukhom tumane," V.V. Veresaev portrayed a painter entering an overflowing railroad car and requesting of strangers that perhaps a *zemliak* could find him a berth. The strangers oblige. Later the characters in this story talk about how they receive news of their families and gossip from their villages through the *zemliak* network. In other Russian literary works of the late nineteenth and early twentieth centuries, the idea of ties among *zemliaki* is often mentioned in passing, and was apparently a detail of everyday life which authors and readers took for granted. In Dostoyevsky's *Crime and Punishment*, for example, an important secondary role is played by two house-painters, *zemliaki* from Riazan who are working together in St. Petersburg.

"And the peasant Nikolay Dementyev," Dushkin continues, "I've known since he was a toddler, for he comes from the same province and district as me - the Zaraysky district, for I'm also from Ryazan... and I knew of course that he'd been working in that house, painting with Dmitry, and he comes from the same village as Dmitry." 

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The protagonist of Gorky's novel *Mother*, whose husband and son are both long-term factory workers in Sormovo, is initiated into revolutionary activity by (among others) a *zemliak*.

This network of *zemliaki* meant, in effect, that rural community ties were still an important sense of identity for the peasant/proletarian in the city and actively affected the decision of where to migrate and what occupation to seek. If this were so, then we must re-examine the motivation often attributed to the migrating peasantry and to those who entered the urban work force. If the motivation for leaving the countryside were based on the impossibility of staying in the village due to landlessness, insufficient returns from crops and inadequate repartition of lands, then the frequency of landlessness and of abandoned households should have risen with the rate of out-migration. We have seen that this was not the case. Obviously, some peasants were forced from the village and did fit the role of the disgruntled and shocked peasant who had been pushed into an alien industrial environment.

Theodore von Laue has described such a situation in an article on the peasantry and factory labour. These peasants who came directly from a natural world of crops and animals where they were accustomed to the seasonal timing of planting and harvests, were plunged into the smoke filled and physically alien factories of the city. Such peasants were afflicted by the shock of the unfamiliar but not all experienced this to the same degree. To place all urban *otkhodniki* under the one psychological rubric, however, is to forget the full traditions of *otkhodnichestvo*. Peasants had been leaving their

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villages and seeking additional wages for at least two centuries. By the
nineteenth century as we have seen certain gubernii and uezdy were
known for their otkhodniki metalworkers or plasterers, and zemliaki
had firmly established the urban connection. In some cases, such as in
Kolomenskoye uezd in Moscow guberniia, a local machine
construction plant became the school for learning metalworking in
order to migrate to St. Petersburg. Peasants were put through an
industrial apprenticeship in a rural district before journeying to the
urban metal plants. Matvei Fisher, a St. Petersburg worker, had
learned the metalworking trade from his godfather and "had no
ambivalence about an earlier peasant identity to cope with." Some
peasants were able to see the urban setting as a positive alternative to
a life in the village and migrated with realistic expectations in order to
enter the industrial labour force. We need not see urban workers as
either peasants or proletarians. They were somewhere in between.
Nor was this an intermediate stage a new phenomenon of the rapidly
industrialising nineties. The otkhodniki peasants had already made
the duality of urban/rural connections an institutionalised form of
life by that time.

Given this view of the peasant urban workers, a discussion of
the ties to the countryside of peasant/proletarians need not signal
support of either the “primitive” or “mature” urban worker. These
ties to the countryside merely suggest a continual symbiotic
relationship between the countryside and industrial centres.

The primary proof of the ties to the countryside of the Tula
working class was the possession of an allotment (nadel) in the

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91 Reginald Zelnik, "Russian Bebels: An Introduction to the Memoirs of the Russian
Workers: Semen Kanatchikov and Matvei Fisher," in Russian Review vol. 35, no. 4,
October 1976, p.419.
village. In 1899, at the Tula cartridge factory, of those workers surveyed, ninety per cent of the work force possessed a land allotment.

Ties to the countryside were also demonstrated through the numbers of married proletarians who did not live with their families but who, in fact, maintained their dependants in the countryside. N. K. Protasov estimated that two-thirds of peasants working in urban centres from Odoev uezd, Tula guberniia remitted money to their dependants in the countryside.\(^{92}\) The maintenance of dependent family members comprised a social, as opposed to economic, function of the village in the lives of the urban "newcomers" (prishly).

This social function had many ramifications. A physician, writing for a social action periodical during the nineties, complained that accurate statistics on factory mortality could not be composed because workers went na rodinu when they felt that they were going to die.\(^{93}\) A similar situation was found in the textile plants where the small numbers of older men as opposed to women was attributed to their return to the village. Nor were the obligations between village and city one-sided. In his short story Veresaev described an unhappy smelter on his return to the city after leave in the country. The smelter explained how his mother had become ill and he had sent his wife out from the city to care for her. His mother's continued disability meant that he could no longer live "as a family, nobly and clear" in the city because his wife had to remain in the countryside.\(^{94}\)

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\(^{92}\) *Selskhoziaisvenny Obzor* p.58.

\(^{93}\) D.P. Nikolskii, "K voprosu o vliianii fabrichnago truda na fizicheskoe razvitie bolezennost i smertnost rabochago." in *Zhurnal Russkago obschestva okhrany narodnago zdraviiia* no. 8, 1895, p.625.

\(^{94}\) V.V. Veresaev, "V sukhom tumane," in *Povesti i rasskazy* Moscow: 1956, p.118.
The ties between village and city at the turn of the century were still a very potent force in the lives of Tula workers. The practice of *otkhodnichestvo*, begun under serfdom, had created and maintained the "village connection" to the city. *Otkhodnichestvo* and *zemliaki* had become agents of transition and acclimatisation to the urban environment. Rural industrial enterprises, where over half of the Empire's four and a quarter million manufacturing labourers were employed, had become schools of factory life which eased the transition from farm to factory. The Tula *prishly* originated from regions in close proximity to the city, yet the psychological pull of the village as an agent of social security continued to be strong. According to census takers, the great majority of workers would still demand that they be called peasants, even at the turn of the century. Because of *zemliachestva* and the constant heavy influx of *otkhodniki*, the problems and grievances of the home village were readily known to those working in the cities and village attitudes remained a fresh component of their urban outlook. Furthermore, we can detect little direct institutional influence on the formation and operation of the Russian labour market. The tsarist government was not the decisive agent of migration, nor did the commune exercise a significant control over the flow of people in and out of the village. Instead, wage labour developed in accordance with the transformation of rural social relations and with the growing demand for labour on the part of capitalist employers.

Chapter 4

Composition of a Working Class Family
Almost all students of Russian industrial life have seen great significance in the movement of workers to industrial centres. Populists in the 1870s saw in this movement a lamentable separation of workers from the soil and the village commune. Advocates of capitalist development believed that an hereditary class of skilled industrial workers would be a cornerstone of future Russian development, while revolutionary Marxists expected such workers to become the vanguard of future struggle. The question of marriage and family life of the working class has been the focus of much attention by both Soviet and Western scholars. V. Iu. Krupianskaia, in an article on the evolution of proletarian family life, has described the 1890s as the period when the proletarian family “blossomed.” It was during the nineties, Krupianskaia suggests, that workers in large numbers dropped their obligations to the countryside, stayed the full year cycle in the city, and consolidated their immediate families in an urban environment.\(^1\) Contemporary observers, such as Alexandra Kollontai, on the other hand, saw the nineties and the intensification of industrialisation as the period of decomposition of the family. She claimed that the poverty of urban workers forced men, women, and children into the factory and that familial roles and communication became subordinated to “the factory whistle.”\(^2\) Western scholars, such as James Bater, suggest that the absence of families in the cities led directly to growing instances of illegitimacy, venereal diseases, and prostitution.\(^3\) Industrialisation and urbanisation have been held responsible by different authors for both the creation of the solid


proletarian family and the destruction of the family unit. The truth lies somewhere in between and has much to do with the individual outlooks of workers themselves. All agreed, however, that the worker whose family was with him in the city or factory was in a very different position from the one who had left his spouse and children behind in the village.

In Tula province and in the city itself at the end of the nineteenth century the proportion of women and children in the cities and factories was increasing rapidly. The task of the present chapter is to first assess the importance of female and child labour in industrial Tula. Secondly, it is to describe the effect of such employment upon traditional patterns of family life. Finally, it is to determine to what extent new skills and attitudes were carried forward from generation to generation by an hereditary proletariat.

**Women and children at the factories**

The chief incentive for the employment of women and children in Russia as in Western nations was economic. Although deficient in skills and experience, they were cheaper to hire. Increases in mechanisation, especially in certain fields of textile production, made it possible for unskilled women and children to perform tasks which had hitherto required a high degree of skill or physical strength.⁴

The highest proportion of women and children was found in the cotton-spinning industry. In the cotton mills, women and children worked at the simplest and physically least demanding

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operations. While underage males, for example, were most likely to be bobbin-tenders, creelers (*stavilshchiki*), twisters (*prisuchilshchiki*), or operators of machine looms, young girls were concentrated in such occupations as bobbin-tenders, Jenny-tenders (*vatershchitsy*), winders (*motalshchitsy*), fly-frame tenders (*bankabroshnitsy*), and machine-loom operators. In 1880, in Tula province, forty-seven per cent of all girls aged fourteen and under worked at these occupations. More than one-third of all women over the age of sixteen were operators of machine looms. Certain operations were reserved almost exclusively for children or adolescents. For example, seventy-five per cent of all bobbin-tenders were aged fourteen and under; for headers (*probirshchitsy*) the figure was ninety-four per cent; and for twisters (*prisuchalshchitsy*) ninety per cent. But even when boys and girls should have been equally qualified to perform a task, one sex or the other was likely to be favoured, the differentiation depending on the job specification. Thus, in general, girls worked in the same divisions as adult women and boys were more numerous in the divisions where men predominated.

The wages which women received for their work were barely half those paid to adult males, and in the case of children still less. Government studies of industry in Tula provide an especially striking illustration of this wage pattern. In the years 1886 to 1896, adult males' wages were

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6 V. Smidovich, *Materialy dlia opisaniia g. Tuly.* p.32.
7 V. Smidovich, *Materialy dlia opisaniia g. Tuly.* p.32.
8 V. Smidovich, *Materialy dlia opisaniia g. Tuly.* pp.32-34.
9 V. Smidovich, *Materialy dlia opisaniia g. Tuly.* pp.34-35. Smidovich found the following average monthly wages at Tula textile factories: men 14.10 roubles, women 7.52, children under age seventeen, 4.25. Such an overall average conceals differences in the work performed. When wages are compared for a single occupational group, however, an equally great discrepancy appears: male workers at machine looms received an average monthly wage of 17.62, while females received 10.00 roubles.
average wages rose from 235 to 270 roubles per year while the average wage of women and children declined from 100 to eighty-two roubles.\textsuperscript{10}

In addition to the discrepancies in wages were the gender differences in occupations. The trend towards wider application of female labour is illustrated by Table 4-1, which shows the ratio between the sexes at textile factories\textsuperscript{11} in Tula city and province from the early 1880s to 1908. By the 1880s women were already a significant minority in all branches of textile production, and in the more highly mechanised branches, such as cotton-spinning and weaving, they were close to half of the total work force. By the turn of the century, males had become an insignificant minority in such fields as spinning or the production of knitted goods, and women comprised almost half of the total labour force in textiles.


\textsuperscript{11} In Tula province in the early 1880s, ninety-seven per cent of all female factory workers and ninety-two per cent of minors worked in textile production. Pamiatnaia Knizhka Tulskoi Gubernii na 1885 god. Tula: 1885, p.32; Obzor Tulskoi Gubernii za 1885. Tula: 1886, p.5.
<table>
<thead>
<tr>
<th>Location-Year</th>
<th>% Female</th>
<th>Location-Year</th>
<th>% Female</th>
<th>Location-Year</th>
<th>% Female</th>
<th>Location-Year</th>
<th>% Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tula city,</td>
<td>21</td>
<td>2. Tula</td>
<td>3. Tula city,</td>
<td>4. Tula city,</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td></td>
<td>guberniia,</td>
<td>1900:</td>
<td>guberniia,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(textiles)</td>
<td></td>
<td>1880-1885</td>
<td></td>
<td>1908</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. textiles</td>
<td>a. all textiles</td>
<td>a. cotton-spinning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. cotton</td>
<td>b. all non-textiles</td>
<td>b. silk production</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>43</td>
<td></td>
<td>15.4</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>38</td>
<td>2. silk</td>
<td>total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td>factory</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>33</td>
<td>3. wool</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>24</td>
<td>4. dyeing</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>39</td>
<td>5. total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>b. non-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>textiles</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

One reason for the sharp increase in the number of women employed at factories was the Russian government’s effort to regulate child labour. In the early 1880s children under the age of fourteen had constituted 8.5 per cent of the work force in Tula’s textile factories, and 11.5 per cent at textile factories in the guberniia. Fully thirty-two per cent of all textile workers were under the age of twenty, and in the guberniia this figure reached thirty-five per cent. Factory laws were introduced in 1882, 1884, and 1885 to prohibit the employment of children under the age of twelve, to restrict the number of hours which those aged twelve to fourteen could work, and to prohibit night work for those under sixteen. These regulations reduced the number of children in factory work almost immediately. As Table 4-2 indicates, however, older adolescents remained a significant proportion of the work force. Children seem to have been replaced mainly by women, while the proportion of adult males in the textile work force either stayed the same or declined.

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13 Before the law of 1882 was promulgated, children had been 9.9 per cent of the work force in woollen production and 8.6 per cent in cotton. By 1885 these figures had fallen to 0.7 per cent and 2.5 per cent respectively. I.I. Ianzhul, *Iz vospominanii i perepiski fabrichnogo inspektora pervogo prizyva: Materialy dlia istorii Russkogo rabochego voprosa i fabrichnogo zakonodatelsstva*. St. Petersburg: 1907, p102.
Table 4-2: Ages or workers and migrants in Tula (by sex)

<table>
<thead>
<tr>
<th>Year</th>
<th>Ages</th>
<th>Under 15 Male</th>
<th>Under 15 Female</th>
<th>15-19 Male</th>
<th>15-19 Female</th>
<th>20-39 Male</th>
<th>20-39 Female</th>
<th>40 and over Male</th>
<th>40 and over Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I. Workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 1880</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. All textile 100</td>
<td></td>
<td>8.6</td>
<td>6.1</td>
<td>21.1</td>
<td>22.8</td>
<td>48.6</td>
<td>49.0</td>
<td>21.4</td>
<td>21.9</td>
<td>100</td>
</tr>
<tr>
<td>2. of whom, weavers 100</td>
<td></td>
<td>9.0</td>
<td>12.8</td>
<td>19.3</td>
<td>20.5</td>
<td>55.0</td>
<td>50.8</td>
<td>23.4</td>
<td>15.7</td>
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</tr>
<tr>
<td>b. 1900</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. All factory 100</td>
<td></td>
<td>.9</td>
<td>.8</td>
<td>19.4</td>
<td>21.6</td>
<td>59.2</td>
<td>61.4</td>
<td>20.1</td>
<td>15.8</td>
<td>100</td>
</tr>
<tr>
<td>2. of whom, all textiles 100</td>
<td></td>
<td>.5</td>
<td>.4</td>
<td>16.9</td>
<td>21.7</td>
<td>55.6</td>
<td>61.2</td>
<td>26.5</td>
<td>16.8</td>
<td>100</td>
</tr>
<tr>
<td>3. All crafts 100</td>
<td></td>
<td>3.2</td>
<td>.4</td>
<td>50.2</td>
<td>32.5</td>
<td>35.5</td>
<td>51.5</td>
<td>10.9</td>
<td>15.2</td>
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</tr>
<tr>
<td>II. All migrants</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. All 100</td>
<td></td>
<td>10.8</td>
<td>10.0</td>
<td>14.3</td>
<td>14.0</td>
<td>50.8</td>
<td>41.1</td>
<td>24.1</td>
<td>34.9</td>
<td>100</td>
</tr>
<tr>
<td>2. of whom, newly arrived 100</td>
<td></td>
<td>19.3</td>
<td>19.3</td>
<td>12.9</td>
<td>13.2</td>
<td>53.3</td>
<td>49.2</td>
<td>14.5</td>
<td>18.2</td>
<td>100</td>
</tr>
<tr>
<td>b. 1900</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. All 100</td>
<td></td>
<td>8.2</td>
<td>9.6</td>
<td>14.5</td>
<td>9.6</td>
<td>55.3</td>
<td>48.5</td>
<td>21.9</td>
<td>32.9</td>
<td>100</td>
</tr>
<tr>
<td>2. of whom, newly arrived 100</td>
<td></td>
<td>16.4</td>
<td>19.2</td>
<td>16.4</td>
<td>15.4</td>
<td>55.6</td>
<td>50.2</td>
<td>14.5</td>
<td>18.2</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: V. Smidovich, Materialy dlia opisaniiia g. Tuly. Sanitarnyi i ekonomicheskii ocherk. Tula: 1880, pp-38-42; Obzor Tulskoi Gubernii za 1880. Tula: 1881, p.12, Table II; Pamiatnaiia Knizhka Tulskoi Gubernii na 1900 god. Tula: 1900, pp.36-38 Table II; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, pp.116-18, Table V.

Like their male counterparts, most female workers in the city of
Tula were migrants. The great majority were of the peasant soslovie, came from the surrounding provinces in almost exactly the same proportions as males, and stayed in the city just as long as males did. For women as for men, Tula's chief attraction was wages; almost two thirds of all migrant women were independent wage-earners. Among women, however, the proportion working in factories was considerably smaller than among men - 8.5 per cent of all female workers as compared to 15.5 per cent of males. The majority of women worked as domestic servants or in small-scale trade, craft, or service establishments, for example, as waitresses, seamstresses, and laundresses. For women, as for men, there were many important similarities between the lives of factory workers and non-factory working population. In considering changes in traditional family patterns, attention is not restricted to the factory population, but the total migrant population is examined as well.

Composition of the work force: patterns of female migration

Female participation was not uniform throughout the occupational groups. While women clearly dominated in the textile industry, their numbers were noticeably smaller in those occupations which seem to have required more physical strength or skill, such as

14 According to 1900 figures, there were 34,748 female migrants residing in Tula or sixty-six per cent of the total female population. Pamiatnaia Knizhka Tulskoi Gubernii na 1900 god. Tula: 1900, p.36-38 Table II; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, p.116-18 Table V.
15 In 1900, seventy per cent of female migrants were of the peasant soslovie; 79.6 per cent of migrant women came from eight surrounding provinces, as compared to 79.8 per cent of migrant men; and 14.9 per cent of all female peasant migrants had lived in Tula for more than twenty years, as compared to 14.2 per cent of males. Pamiatnaia Knizhka Tulskoi Gubernii na 1900 god. Tula: 1900, p.36-38 Table II; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, p.116-18, Table V.
printing and construction. There were specific reasons why certain trades would attract a higher or lower share of female labour.¹⁷ These were more complex than lack of strength or skill. There were social and cultural explanations why women should have concentrated in certain trades and dominated specific functions within that trade. An urban industrial centre provides a very large and variegated assortment of trades and employment functions. However, women were inclined largely toward those functions which were closest to their traditional female occupations.¹⁸

In traditional Russian peasant society women were responsible for the domestic functions of cooking, cleaning and care of children. They were also responsible for agricultural tasks such as cattle tending and stacking hay. In addition, women “spent their free time spinning and weaving for the family.”¹⁹ Peasant pre-industrial families always expected women to contribute their fair share to the household economy, and this principle extended even when additional work had to be found beyond the household.²⁰ In the Russian peasant family, a woman’s role was very dynamic and work roles strictly defined:

Field work was strictly divided between men and women... men’s duties consisted of plowing, sowing, reaping, gathering, bundling and transporting. Women stacked hay... they also helped with chain threshing. All work in gardens except for the initial plowing was done by women...²¹

Although it is apparent that strenuous tasks such as ploughing

¹⁷ The textile, food, clothing and shoe industries registered a high female presence.
and bundling were considered to be "male" tasks, it is also apparent that women also were required to perform arduous physical tasks. Although urban industrial tasks such as soap making or candle production could hardly have been considered too strenuous for women used to the physical labour of the village, soap and candle production were considered men's work in the city. Nor should educational level have been a firm barrier to the entry of women into certain trades. Although the male workers of Tula had a higher percentage of literacy than women workers, the percentage of literacy for the female worker population of Tula was certainly high enough to provide sufficiently qualified female candidates.

These strict divisions of labour into male and female domains were passed along with the migrating peasantry into the cities. In the city we find women concentrated in those functions which were in accordance with the division of labour in peasant societies. In other words, although a large range of jobs were available to Tula working women, both more and less arduous than the physical demands of peasant village life, women followed the traditional patterns and sought out those jobs which "did not involve a radical departure from the past."

The Soviet statistician A.G. Rashin has described the increasing proportion of women in Tula at the turn of the century as a sign of an increase in the city's permanent population, a necessary consequence.

22 Figures for Tula for 1900 show that of the 120 workers engaged in the production of candles only three were women and of the five workers employed in soap making none were women. See, Obzor Tulskoi Gubernii za 1900 god, Tula: 1901, p.62.
23 As a basic guide to literacy levels in Tula seventy-one per cent of all male workers of Tula were literate in 1897; forty-four per cent of all female Tula workers were literate in that same year. Although the male figure is certainly higher, the female percentage is suitably high to represent a large candidate pool for the more skilled industrial jobs.
of the development of capitalism and the erosion of old patterns of life.\textsuperscript{25} While this statement is undoubtedly valid as an overall description of the changes occurring, the relationship between the various elements described, namely, female migration, the marriage rate, demographic shift of entire families to the cities, and the formation of an hereditary working class, may not have been a direct, causal one. Although the ratio of women to men in Tula's population grew from seventy to 78:100 between 1871 and 1900, it remained lowest at 65:100, for the age group fifteen to thirty-nine, the very ages at which marriage was most likely to occur. Among all migrants, the ratio was 68:100; among migrants aged fifteen to thirty-nine, it was 60:100.\textsuperscript{26}

The above figures are not difficult to explain. They reflect the fact that men of working age were attracted to Tula in greater numbers than women, even when this meant leaving their families behind. What is particularly important about the example is that it underscores the complex and contradictory nature of the social processes which Rashin has mentioned. If a certain proportion of women behaved in the predicted fashion, that is, moved to the city, married, and raised their children to be factory workers, many others did not. Historical evidence cannot be taken at face value: an increase in the proportion of women did not necessarily mean the proportion of marriageable women increased, and an increase in the number of women married did not necessarily lead to an increase in the number of families. In the following pages, an attempt will be made to

\textsuperscript{26} Zhurnal Godichnago Zasedaniia Tulskago Gubernskago Statisticheskago Komiteta 19-go Maia 1900 goda. Tula: 1900, p.34-35.
determine more precisely which women moved to Tula, when they married, and where and how families were raised.

The first question to be considered is what proportion of migrants and workers fell within the ages of marriage and childbearing. In view of the fact that these migrants were mostly able-bodied persons seeking employment, we might expect that the great majority would be young adults. The age group twenty to thirty-nine, however, turns out to be barely a majority of the worker or migrant population. Table 4-2 shows the age distribution of male and female workers and migrants in various years. Comparing the earlier and later years, a decrease in the overall proportion of minors, adolescents, and persons over forty is apparent. Nonetheless, the age distribution of newly arrived migrants was virtually unchanged from 1880 to 1900.

The proportion of women between the ages of twenty and thirty-nine was lower than that of men in almost every case in Table 4-2. One reason for this pattern is that, as noted above, minors were preferred for certain types of work. This pattern persisted for girls, but occurred less often for boys after the law of 1882 came into effect. Moreover, a greater proportion of females worked in small handicraft establishments which were not affected by the factory laws, and continued to hire minors.

A second factor accounting for the lower proportion of women aged twenty to thirty-nine was that older women without families

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27 In the following discussion, the age range twenty to thirty-nine will be considered the age range of marriage and childbearing. Although a certain number of marriages occurred before age twenty, government statistics for 1900 show that over ninety per cent of males and eighty-five per cent of females in the age group fifteen to nineteen were unmarried. For this reason the latter group will be treated as a distinct entity.

were more likely than older men to look for work in cities and factories. It was noted in the discussion on the laws regulating passports and departure from the peasant village, that women were obliged to get the permission of the head of the household in order to depart. The laws were more lenient, however, where widows and spinsters were concerned.

...a widow, if she is able to work and has not fallen under the influence (vlast) of her elder son, has freedom of action. As for the authority of the village it is weaker after the death of a husband; moreover, the village assists childless widows to become free of the land, since this is often advantageous to the village.  

This pattern shows up clearly in the census figures. Of all women who had resided in Tula for three years or less, thirteen per cent were age forty or above; of all men who had lived there for the same length of time, 7.5 per cent were aged forty or above.  

Older women are present in much smaller numbers among factory workers, and at first glance, there seems to be no evidence of widows or spinsters seeking factory employment. More detailed figures on the length of workers' experience, however, show that women were more likely than men to enter factory work after the age of forty. Of all the men over forty in Tula's textile industry, 2.1 per cent had been working in factories for three years or less; for women the comparable figure was seventeen per cent. The same pattern was found in Tula guberniia, where the figure was 5.3 per cent and eighteen per cent respectively. Furthermore, twenty per cent of women workers had begun factory work after age twenty-five,

29 G.D. Bakulev, Tulskaia promyshlennost. p. 32.
31 Pamiatnaia Knizhka Tulskoii Gubernii na 1900 god. Tula: 1900, p.40 ; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, p.20-22, Table IV.
whereas only eight per cent of men had begun work at such an age.\footnote{Pamiatnaia Knizhka Tulskoi Gubernii na 1900 god. Tula: 1900, p.36-38, Table II; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, p.116-18, Table V.}

The foregoing discussion suggests a substantial proportion of the migrant and factory population (especially women), was either too young or too old to be raising families in the cities and factories. However, what of the age group in between? What proportion of this group actually married and had children? Shortly, the rates of marriage for various groups will be examined. Before this is done, one final point must be made regarding women's patterns of migration. The average duration of employment of female factory workers was considerably lower than that of males. Figures for 1900 for textile workers in Tula show that fifteen per cent of all female workers had been at their jobs for three years or less while for males the comparable figure was 6.2 per cent. Moreover, forty-two per cent of females were found to have been working for more than six years as compared to seventy-two per cent of males.\footnote{Pamiatnaia Knizhka Tulskoi Gubernii na 1900 god. Tula: 1900, p.45; and Obzor Tulskoi Gubernii za 1900. Tula: 1901, p.40.} Smidovich's study of Tula workers reveals that in 1880 in Tula province thirty-three per cent of males and fifteen per cent of females had more than fifteen years' experience in factory work. Females, Smidovich concluded, were a more casual (sluchainyi) element of the factory population.\footnote{V. Smidovich, Materialy dlja opisanija g. Tuly. p.36.}

The pattern of women factory workers' migration, in other words, was similar to that described in Chapter Three for the total migrant population of Tula: the great majority remained at the factory for only a few years and then departed. Moreover, female workers of marriageable and childbearing age showed a greater tendency than older or younger ones to depart. This is evident from Table 4-3 which
compares the departure rates of men and women in various age groups. Among males the percentage of migrants remaining in Tula after five years drops sharply for ages twenty to twenty-nine, presumably due to military service. It rises to fifty per cent for the thirty to thirty-four age group and then tapers off slowly for each subsequent group as mortality and out-migration of older males become more significant.

Table 4-3: Persons who moved to Tula in 1896 and were still living there in 1900 (% of various age groups)

<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-14</td>
<td>76.6</td>
<td>83.7</td>
</tr>
<tr>
<td>15-19</td>
<td>86.8</td>
<td>73.4</td>
</tr>
<tr>
<td>20-24</td>
<td>52.9</td>
<td>59.6</td>
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<td>25-29</td>
<td>33.6</td>
<td>65.3</td>
</tr>
<tr>
<td>30-34</td>
<td>49.0</td>
<td>57.1</td>
</tr>
<tr>
<td>35-39</td>
<td>50.0</td>
<td>77.8</td>
</tr>
<tr>
<td>40-44</td>
<td>48.7</td>
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<tr>
<td>45-49</td>
<td>36.9</td>
<td>63.0</td>
</tr>
<tr>
<td>50-54</td>
<td>39.1</td>
<td>65.3</td>
</tr>
</tbody>
</table>

Sources: Pamiatnaja Knizhka Tulskei Gubernii na 1900 god. Tula: 1900; and Obzor Tulskei Gubernii za 1900. Tula: 1901.

Among females, the proportion of migrants still residing in Tula after five years is lowest for the age groups thirty to thirty-four and twenty to twenty-four, and only slightly higher for ages twenty-four to twenty-nine. This pattern can be explained in several ways. Economic considerations may have led employers to favour adolescent girls and dismiss grown women; a few years of factory
employment or city life may have ruined the health of female workers and forced them to depart; or they may have departed of their own accord, to look for work elsewhere or to return to their native village. In any case, this unsettled pattern seems likely to have inhibited the development of family life or the growth of a city or factory based family unit. Female workers, if they were not too old or too young to be marrying, might well have been moving about too much to be raising families.

Patterns of marriage

Migration was, of course, only one of many factors which could have affected the rates and patterns of marriage in Tula. Others included the conditions of city living and employment such as housing, wages, and the cost of living. The net effect of all such factors is reflected in available data on marriage, which are summarised below in Tables 4-4 and 4-5.
Table 4-4: Age and marital status in Tula and European Russia, 1897

<table>
<thead>
<tr>
<th>Age</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Married Widowers</td>
<td>Single Married Widowers</td>
</tr>
<tr>
<td>15-16: Tula Russia</td>
<td>99.9</td>
<td>99.9</td>
</tr>
<tr>
<td>17-19: Tula Russia</td>
<td>94</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>7.6</td>
</tr>
<tr>
<td>20-29: Tula Russia</td>
<td>48</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>58</td>
</tr>
<tr>
<td>30-39: Tula Russia</td>
<td>16</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td>90</td>
</tr>
<tr>
<td>40-49: Tula Russia</td>
<td>10.6</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>92</td>
</tr>
<tr>
<td>50-59: Tula Russia</td>
<td>9.7</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>2.8</td>
<td>87</td>
</tr>
<tr>
<td>60 and over: Tula Russia</td>
<td>10</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>66</td>
</tr>
<tr>
<td>Total: Tula Russia</td>
<td>40</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>65</td>
</tr>
</tbody>
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Sources: *Pervaia Vseobshchaia Perepis Naseleniia Rossiiiskoi Imperii, 1897 g.; obshcaii svod po imperii rezultatov razrabotki dannykh pervoi vseobshchei perepisi naseleniia proizvedennoi 28 ianv. 1897 g. St. Petersburg: 1905, Table V; Tom XLIV Tulskai Guberniia. St. Petersburg:1904, p.xi.*
<table>
<thead>
<tr>
<th>Age</th>
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<th>Females</th>
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<td></td>
<td>Single</td>
<td>Married</td>
<td>Widowers</td>
<td>Single</td>
</tr>
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<td>15-19:</td>
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<td>city-born</td>
<td>99.3</td>
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<td>91</td>
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<tr>
<td>migrant</td>
<td>95.9</td>
<td>3.6</td>
<td></td>
<td>86.8</td>
</tr>
<tr>
<td>factory</td>
<td>4.1</td>
<td></td>
<td></td>
<td>13.3</td>
</tr>
<tr>
<td>20-24:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>84</td>
<td>16</td>
<td></td>
<td>52</td>
</tr>
<tr>
<td>migrant</td>
<td>59</td>
<td>40</td>
<td>.2</td>
<td>47</td>
</tr>
<tr>
<td>factory</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-29:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>54</td>
<td>45</td>
<td>.6</td>
<td>35</td>
</tr>
<tr>
<td>migrant</td>
<td>29</td>
<td>69</td>
<td>.8</td>
<td>32</td>
</tr>
<tr>
<td>factory</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>32</td>
<td>65</td>
<td>1.9</td>
<td>25</td>
</tr>
<tr>
<td>migrant</td>
<td>14</td>
<td>83</td>
<td>1.6</td>
<td>22</td>
</tr>
<tr>
<td>factory</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-49:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>23</td>
<td>71</td>
<td>4.7</td>
<td>22</td>
</tr>
<tr>
<td>migrant</td>
<td>9</td>
<td>86</td>
<td>4.5</td>
<td>17</td>
</tr>
<tr>
<td>factory</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-59:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>17</td>
<td>70</td>
<td>16</td>
<td>22</td>
</tr>
<tr>
<td>migrant</td>
<td>8</td>
<td>80</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>factory</td>
<td>83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>over:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>16</td>
<td>55</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>migrant</td>
<td>8</td>
<td>62</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>factory</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for all ages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>over 15:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>city-born</td>
<td>58</td>
<td>38</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>migrant</td>
<td>37</td>
<td>60</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>factory</td>
<td>63</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Pamiatnaia Knizhka Tulskei Gubernii na 1900 god. Tula: 1900, p. 43, Table II; and Obzor Tulskei Gubernii za 1900. Tula: 1901, p. 52, Tables I & III. Persons of unknown age and marital status and divorced persons were included in the totals but were not included in the present table because they represented an insignificant portion. Moreover, each entry in the table has been rounded off to the nearest full per cent. Totals may, therefore, not reach 100 per cent in all cases.
Tables 4-4 and 4-5 illustrate the pronounced differences between Tula's population and the overwhelmingly rural population of European Russia as a whole. City-dwellers seem to have married much later than the rest of the population and a greater proportion of them did not ever marry. Differences are greatest among women over the age of twenty. The proportion of city-dwellers unmarried in the age range twenty to twenty-nine is almost double that found in the larger population while for all ages over thirty it is at least triple that amount. In Tula the proportion of widows in the age range twenty to fifty-nine is likewise more than twice as great as in the total Russian population.

These differences can be seen as a result of migration, of migrants not marrying because of the uncertainty of their position. A comparison of the marital status of the city born and migrant populations of Tula (Table 4-5) reveals that in almost every age group the proportion married is lower among the former. Migrants tended to marry earlier than Tula-born persons, and the proportion that never married is significantly smaller. Tula's migrant population thus occupies an intermediate position in its marriage rate, higher than the city-born but lower than the population of European Russia. Only the category of widows shows a different pattern. Widows comprise a greater proportion of this group than the city-born or the rest of the population.

All this suggests that Tula's lower rates of marriage and its pattern of later marriages were caused by features of city life rather than migration. Tula's migrants seem to have retained, to a certain extent, the marriage patterns of the countryside, with the single exception of widows, whose reasons for moving to the city are discussed above. The particular features of the city which would have
discouraged marriage are well known from the history of other countries, with low wages and cramped living quarters being common reasons. Life in the peasant villages might have been harder still but traditions associated with the extended family and land repartition made marriage and family life possible there for all but a small minority. For the migrant who retained ties to the village this possibility remained open. Among factory workers and in the suburban districts as a whole the proportion of married persons recorded in the government survey of 1900 was higher than in the total migrant population of Tula, although it was still lower than in European Russia as a whole (Table 4-5).

A similar pattern was found in Moscow province in the early 1880s. Women's marriage rates could be arranged in descending order, with the non-industrial Tambov guberniia at the top of the list, followed by Moscow guberniia, Moscow uezd, Moscow guberniia's factory workers, and finally Moscow city. Moreover, when factory workers were categorised by occupation, those in traditional, unmechanised branches of production were found to have higher rates of marriage than those in such technically advanced industries as cotton-spinning or silk-weaving. In the age group sixteen to twenty-four, for example, fifty-six per cent of female bast-matting weavers were married compared with seventeen per cent of female silk-weavers. Studies undertaken in the early part of the twentieth century suggest that literate workers married slightly later than illiterates, and that among males, workers in machine production married later than those in textile and other light industries.

36 Sbornik statisticheskikh svedenii p.279.
37 I.M. Kozminykh-Lanin, Semeinyi sostav fabrichno-zavodskikh rabochikh
In general, then, marriage rates decreased as the degree of industrialisation increased. Attributes which we think of as "modern," "urban," or "proletarian" such as complex industrial skills, work in mechanised industry and literacy were associated with a higher proportion of bachelors and spinsters. Migrants and factory workers in Tula, however, were slow to adopt this pattern, and their rates of marriage tended to be closer to those of the countryside as Table 4-6 indicates.

Table 4-6: Provincial rates of marriage, births and deaths

<table>
<thead>
<tr>
<th>Province</th>
<th>Marriage</th>
<th>Births</th>
<th>Deaths</th>
<th>Natural growth of population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per thousand persons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tula</td>
<td>0.97</td>
<td>4.97</td>
<td>4.08</td>
<td>0.89</td>
</tr>
<tr>
<td>Riazan</td>
<td>1.10</td>
<td>5.81</td>
<td>4.24</td>
<td>1.57</td>
</tr>
<tr>
<td>Orel</td>
<td>0.91</td>
<td>5.36</td>
<td>3.99</td>
<td>1.37</td>
</tr>
<tr>
<td>Tambov</td>
<td>0.89</td>
<td>4.83</td>
<td>3.75</td>
<td>1.08</td>
</tr>
<tr>
<td>Penza</td>
<td>0.98</td>
<td>5.50</td>
<td>4.45</td>
<td>1.05</td>
</tr>
<tr>
<td>Kursk</td>
<td>0.83</td>
<td>5.08</td>
<td>3.75</td>
<td>1.33</td>
</tr>
<tr>
<td>Voronezh</td>
<td>1.01</td>
<td>5.56</td>
<td>4.61</td>
<td>0.95</td>
</tr>
</tbody>
</table>


Riazan province's rate of marriage not only occupies first place amongst the survey region, but for the whole of European Russia. Voronezh comes a close second. Can we infer from these figures that migrants and factory workers in Tula were not assimilated to city life and that they were somehow less open to the influences which caused

Moskovskoi gubernii, Moscow: 1914; data refer to 69,000 workers, and were collected in 1906, Table I, pp.2-11.
city-born people to postpone or avoid marriage? To answer this question we must determine what kind of married life was possible for Tula’s migrants and workers, where they lived, and how they raised their children.

Patterns of residence and household composition

Earlier in the present chapter it was indicated that the number of married men residing in Tula was almost twice as great as that of married women. Since polygamy was not widely practised in Russia at this time, the clear implication is that half of the men had wives who were living somewhere else. The evidence certainly suggests that this was the case.

In the first place, as Table 4-7 indicates, only about one-third of the 40,625 persons who occupied ordinary living quarters in Tula in 1880 were independent householders or members of their immediate families.

Table 4-7: Population by position in household (percentage of total population in each category)

<table>
<thead>
<tr>
<th>Position in Household</th>
<th>Head of Household</th>
<th>Children and grandchildren of head of household</th>
<th>Relatives and their children</th>
<th>Servants and their children</th>
<th>Workers and clerks</th>
<th>Others</th>
<th>Group living units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tula 1880</td>
<td>17.3</td>
<td>16.5</td>
<td>6.1</td>
<td>11.0</td>
<td>12.6</td>
<td>17.2</td>
<td>19.3</td>
</tr>
</tbody>
</table>

38 This total includes group living units such as factory barracks, but excludes hostels, hospitals, prisons, and other institutions which together housed 6,375 persons. Zhurnal Godichnago Zasedaniia Tulskago Gubernskago Statisticheskago Komiteta 3-go Dekabria 1882 goda. Tula: 1883, p.5.
39 This category refers to persons employed by the head of a household who were quartered on the premises, a common pattern in small craft and trading establishments.
40 For example, factory barracks.
Altogether there were 5.2 thousand independent households and 3.1 thousand of these or fifty-nine per cent included children of the head of household; 6.3 thousand such children were counted, giving an average of two children per household. By way of comparison, almost three-quarters of the population of Berlin in 1875 consisted of independent householders and their descendants; sixty-five per cent of the city's households included children with an average of 2.3 children per household.41

As Table 4-7 indicates, the households in Tula's population included a far greater proportion of outside persons than did those in Berlin. In particular, the number of workers and clerks who lived in their employers' households was much greater in Tula, comprising 12.6 per cent of the population as compared to 2.1 per cent in Berlin. Tula's population also included more boarders and servants, the latter apparently a consequence of the greater size of Tula households, and of the greater proportion of boarders and workers in them.42

An even greater difference between the two cities is found in the final column of Table 4-7. Almost one-fifth of Tula's population was housed in non-family units such as factory barracks, while such units were virtually non-existent in Berlin. These units ranged in size

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from single room dwellings to buildings several stories high with dozens of rooms. These were not necessarily sleeping-quarters, since some 2,200 factory and 1,200 craft labourers slept in the room in which they worked during the daytime. Factory barracks were usually of the same type: "Plank beds too short, lying one above another, floors covered with dirt and windows, very small, provided bad light."\(^{43}\) The last category of housing for, in the words of E.M. Dementev, "the most unfortunate of the factory workers," is that covering those who actually lived in the factory itself. Dementev described how the workers, many with children, sought to make themselves comfortable amongst the machines and how their personal possessions were strewn amidst the industrial raw materials and the plant waste.\(^{44}\) In factory workshops there was an average of 13.99 occupants per room while among the factory workers who lived in separate buildings, away from their place of work, the average was 15.6 per room.\(^{45}\) The average number of inhabitants per room on Vasilevskii Island, St. Petersburg was 17.6 person. As Table 4-7 demonstrates, group living units were most common in the Oruzheinogo suburb, which was at that time the most heavily industrialised section of Tula.

The living conditions of the poorest classes of the city and for the industrial labour force among them were literally intolerable. The flats available to the working classes were divided up and rented according to the smallest possible units. Rooms and corridors were broken down into corners and even bed rentals. Frequently, workers


\(^{44}\) E. M. Dementev, *Fabrika, chto ona daet naseleniu i chto ona u nego beret* Moscow: 1897, p.171.

or possibly their families would rent half beds and sleep in shifts with other workers. Clearly, the housing situation at the turn of the century in Tula was overly congested and crowded and an extreme burden on the population. However, it was the unsanitary housing conditions that made the situation intolerable. The ugliness of Russian worker districts often has been given scant attention by historians. But aspects of the workers’ home environment should not be glossed over. For many workers, the neighbourhoods and room interiors were the only environment they knew besides the factory interior itself. As such, it is crucial that we have a strong image of the working class neighbourhoods and homes. A German observer emotionally described his feelings about a working class district of St. Petersburg at the time:

There can be nothing more melancholy than the Vyborg workmen’s quarter in St. Petersburg, with its streets where poverty and neglect stalk hand in hand. The houses are for the most part dirty wooden barracks enclosing evil smelling courtyards overfilled with every kind of refuse; while the various odors of foods in preparation coming through from the windows are enough to cause nausea in all but the least sensitive persons. The whole enormous Vyborg quarter contains not one public park.46

Whilst another commented:

In my opinion, since the Russian factory workers, due to wretched housing, are absolutely precluded from living a decent family life, their housing in employer-owned barracks, far from being an evil, is a true benevolence. In the great industrial centers, low wages and high rents compelled the Russian worker to be content, for himself and his family, with a mere “corner” in a room costing him two or three roubles per month, so that not infrequently one room would hold four families.47

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It is not surprising that the conditions of city and factory life discouraged workers from maintaining families. Low wages and the terms of employment made it virtually impossible for workers to maintain separate living quarters of their own. In the more primitive establishments, those who slept in the workshops could keep their families beside them but only in the most unhygienic of conditions. Furthermore, mothers had difficulty in caring for children since nurseries and similar facilities were virtually nonexistent. Toward the end of the century, more enlightened factory owners began to build living quarters for workers' families but families were often crowded several to a room and those with small children remained a small minority.

As a result, the factory population was effectively limited to those who were employed or capable of being employed. This can be seen from Table 4-8, which lists the number of dependants per capita in various industries.

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48 Ianzhul, "Zhenshchiny-materi na fabrikakh." in Ocherki i issledovaniia, Moscow 1884, vol. I, p.391. Ianzhul found such facilities at four of the 174 industrial establishments which he inspected in Moscow province in 1882-1883.

49 At the Prokhorov textile factory in Moscow, the management was especially proud of the living facilities which consisted of the following: nine barrack rooms for bachelors, with 120-150 workers in each; four such rooms for unmarried women, with 80-150 persons per room; fifty-one rooms for childless couples, with four couples in each room; and 132 rooms for families, with four to seven persons per room. The source of these figures, an official history sponsored by the owners of the factory, does not indicate whether each of the family rooms was limited to a single family. The actual occupancy of these facilities might have been greater than these figures suggest. Adding up the maximum figures, the living quarters seem to have housed 3,282 persons, yet the same source indicates that 3,987 workers actually lived there. Prokhorovskaia Trekhgorinaia manufaktura, Moscow: 1900, pp.50-51.
Table 4-8: Dependents *per capita* of workers and other self-supporting persons in Tula, 1880 and 1897

<table>
<thead>
<tr>
<th>GROUP</th>
<th>DEPENDANTS PER CAPITA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1880 Workers</td>
</tr>
<tr>
<td>Together</td>
<td>0.27</td>
</tr>
<tr>
<td>1. Metalworkers</td>
<td></td>
</tr>
<tr>
<td>2. Machine and instrument makers</td>
<td>0.39</td>
</tr>
<tr>
<td>3. Chemical</td>
<td>0.23</td>
</tr>
<tr>
<td>4. Textile</td>
<td>0.08</td>
</tr>
<tr>
<td>a) Total</td>
<td>0.05</td>
</tr>
<tr>
<td>b) Weaving &amp; Spinning (factory)</td>
<td></td>
</tr>
<tr>
<td>5. Food Preparation</td>
<td>0.10</td>
</tr>
<tr>
<td>6. All workers in industry (craft and factory)</td>
<td>0.17</td>
</tr>
</tbody>
</table>


The figure is lowest among textile workers with less than one dependant for every ten self-supporting persons in 1880. This was, in part, due to the higher proportion of women and children in that industry's work force. However, even where highly-skilled, better paid male workers predominated, as in machine-building, the statisticians counted only four dependants for every ten workers. A comparison of the figures from 1880 to 1897 suggests the number of dependants was increasing over the long term. However, the increase might not have been as great as figures for any one category of workers would suggest, since different branches of production were

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\(^{50}\) The two censuses divided this group in such different ways that no comparisons are possible.
counted together in the two statistical surveys, making comparisons difficult.

A worker, male or female, at the turn of the century could either raise a family in the city or maintain a family in the countryside. Given the chronic housing shortage and the high cost of living in Tula, the maintenance of an urban family was prohibitive for all but the most highly paid industrial workers. Although workers continued to raise large families, they were located back in the villages. For 879 male workers at the Batashev samovar factory in 1895, the average family size was 7.3 persons, the great majority of whom were living in the countryside.\textsuperscript{51} An example of this "farming out" of familial responsibilities is provided by the reminiscences of a worker interviewed by Soviet historians in the 1930s. Both of his parents had begun factory work in their early teens, and he himself was born in factory barracks, yet he was sent almost immediately to the countryside to be raised by relatives, returning to the factory when he was six years old.\textsuperscript{52}

The figures on family membership for St. Petersburg in Table 4-9 show that the great majority of workers resided in the city without any familial connections.

\textsuperscript{51} G.D. Bakulev, \textit{Tulskaiia promyshlennost}. Table II, p.47.
Table 4-9: Family membership by residence and industrial occupation, St. Petersburg

<table>
<thead>
<tr>
<th>Occupations</th>
<th>Living Alone Outside Family (%)</th>
<th>% Married Living with Family</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Treatment of Fibrous Products</td>
<td>88.4</td>
<td>87.8</td>
</tr>
<tr>
<td>Treatment of Animal Products</td>
<td>92.3</td>
<td>84.0</td>
</tr>
<tr>
<td>Treatment of Wood</td>
<td>90.4</td>
<td>89.0</td>
</tr>
<tr>
<td>Treatment of Metal</td>
<td>72.5</td>
<td>76.0</td>
</tr>
<tr>
<td>Treatment of Mineral Products</td>
<td>82.3</td>
<td>76.8</td>
</tr>
<tr>
<td>Chemical Production</td>
<td>75.3</td>
<td>76.7</td>
</tr>
<tr>
<td>Alcohol</td>
<td>96.4</td>
<td>80.9</td>
</tr>
<tr>
<td>Food Products</td>
<td>96.7</td>
<td>86.6</td>
</tr>
<tr>
<td>Tobacco Production</td>
<td>81.7</td>
<td>86.6</td>
</tr>
<tr>
<td>Printers</td>
<td>70.5</td>
<td>50.6</td>
</tr>
<tr>
<td>Production of Clothes and Shoes</td>
<td>95.2</td>
<td>89.2</td>
</tr>
<tr>
<td>Construction</td>
<td>90.7</td>
<td>--</td>
</tr>
<tr>
<td>Production of Health Products</td>
<td>95.6</td>
<td>90.4</td>
</tr>
</tbody>
</table>


Although the printers had a lower percentage of married workers, they had the highest percentage of intact married families. On the other hand, workers who produced for domestic consumption demonstrated a very high incidence of marriage but they had a very low percentage for intact urban families. A survey of Tula armament workers in 1898 indicated those with larger families did not keep
them in Tula. Of those workers who had only a spouse to support, eighty-six per cent maintained their household in Tula, and of those with families of three to five persons, fifty-eight per cent kept the entire family in the city. Moreover, twenty-eight per cent of worker families of six to eight persons and eleven per cent of those with nine or more persons housed their family in the city. Finally, thirty-five per cent of workers with families of six or more kept the entire family elsewhere, while the remainder divided their household between the city and the countryside.53

"Hereditary Workers"

One question remains: To what extent did children follow their parents to the factories? This issue aroused considerable interest among researchers at the end of the nineteenth century, with the result that fairly detailed information was collected in several different studies, including three which focussed on Tula city and province. In general, the results of these investigations suggested that an hereditary class of factory workers was forming. In Smidovich's study of Tula workers which was carried out in 1880, forty-three per cent of male workers followed in their fathers' footsteps (that is, in taking up urban factory employment).54 Three years later, E. M. Dementev surveyed more than 18,000 workers in Tulskii, Aleksinskii and Bogoroditskii uezdy, and found that fifty-five per cent of them were "hereditary" (potomstvennye), that is, sons of factory workers.55 A third study, carried out at the Batashev samovar factory in Tula city

54 V. Smidovich, Materialy dlja opisanija g. Tuly. p.48.
55 Sbornik statisticheskikh svedenii po Tulskoi gubernii, Tula: 1890, p.145.
in 1895, reached an identical figure: fifty-five per cent of all male workers were second, and in some cases, even third, generation workers.\textsuperscript{56}

This pattern would seem to follow logically from the pattern of child labour discussed earlier in the present chapter. Young people entered the factory at a tender age and those whose parents or relatives were already working there might have found it easier to follow a well-trodden path.\textsuperscript{57} Is it proper to conclude from this, however, that there existed in Tula province a "true estate of workers, permanent (iskonnyi, literally "age-old") and not occasional?"\textsuperscript{58} In the main, the nineteenth century researchers answered this question in the affirmative, and later generations of economists and historians, from Lenin and Tugan-Baranovskii to the Soviet scholars of the 1960s, have tended to agree.\textsuperscript{59} However, a close scrutiny of the available evidence raises several interesting questions about the successive generations of Russian factory workers.

In the first place, many of those who were listed as second generation factory workers retained a land allotment in their native villages. The clearest evidence on this point comes from a study of Vladimir province in the years 1894 to 1897. Out of a total of some 21,000 "hereditary" workers roughly two-thirds or 13.8 thousand possessed a land allotment.\textsuperscript{60} This, as was indicated in Chapter Three,

\textsuperscript{56} Cited in Bakulev, \textit{Tulskaiia promyshlennost}. pp.46-48.

\textsuperscript{57} According to the Batashev study, workers who entered the factory before the age of sixteen were eighty per cent second-generation; those who began factory work after the age of twenty-one were seventy-eight per cent first generation. Bakulev, \textit{Tulskaiia promyshlennost}. pp.46-48.

\textsuperscript{58} \textit{Sbornik statisticheskikh svedenii po Tulskoi gubernii}, Tula: 1890, p.156.

\textsuperscript{59} The most comprehensive treatment of this question is that of L.M. Ivanov, "Preemstvennost fabrichno-zavodskogo truda i formirovanie proletariata v Rossii," in \textit{Rabochii klass i rabochee dvizhenie v Rossii (1861-1917)}, Moscow: 1966, pp.58-140.

\textsuperscript{60} "Otchet fabrichnoi inspektii Vladimirskoi gubernii 1894-1897 g." as quoted in \textit{Rabochii klass i rabochee dvizhenie v Rossii (1861-1917)}, p. 102. (my calculation).
might or might not have been an involuntary tie to the peasant economy. In Smidovich's study, the occupational groups with the very highest proportion of second generation workers were also the ones with the highest proportion of summer departures to the countryside, that is, hand-weavers, spinners and hand dye-printers. This would suggest their tie to the land was more than a nominal one.

In the second place, Dementev's figures on the age of "hereditary" workers disclose an unexpected pattern. In the two occupational groups of spinners and weavers, which between them accounted for about forty per cent of his sample, the proportion of "hereditary" workers was higher in the older age brackets than among younger workers. Outside the textile industries the reverse pattern was found. Each successive age group had a lower proportion of "hereditary" workers than the one before it. Dementev's explanation for this phenomenon was that the textile industry was expanding so rapidly that the available pool of second generation workers was insufficient, forcing employers to take on inexperienced first generation labourers. The cotton industry did indeed expand quite rapidly in the late 1870s, but in the years of Dementev's study it was suffering badly from the effects of a general economic depression. Furthermore, textile production was a diverse industry, and was growing at a much slower rate even in times of general prosperity. Therefore, Dementev's argument can provide, at best, an incomplete explanation of the ages of "hereditary" workers.

Smidovich's study suggests a different explanation.

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61 V. Smidovich, Materialy dla opisaniia g. Tuly. pp.50-53.
63 Sbornik statisticheskikh svedenii po Tulskoi gubernii, Tula: 1890, p.158.
"Hereditary" workers were actually concentrated in several traditional occupational groups in which mechanisation had had little impact, (for example in the handicrafts industry), or had been introduced at a very early point. In these occupations, parents could pass their trade on to their children. In other occupations, either no specialisation was required, as with unskilled day labourers, or the trade was relatively new, so that sufficient numbers of experienced workers had not been trained.64

If "hereditary proletarians" were more common in handicrafts than in mechanised industries, and if children were most likely to remain in the same occupation as their parents, this would seem to undermine the description of "proletarianisation" which Lenin and Soviet historians have postulated. Far from undermining outmoded customs or opening workers' eyes to the new realities which surrounded them, the "hereditary" occupations discussed above would seem to be locking workers into a system reminiscent of the feudal guilds of Western Europe. This impression is reinforced by other evidence from Vladimir province in 1899, which suggests the proportion of "hereditary" workers was highest among workers who lived less than one versta from the factory, and fell off in direct relation to the distance travelled from home to the workplace.65

In Tula province, one of Dementev's colleagues in the zemstvo factory studies of the early 1880s made a striking observation. The "hereditary" proletariat was concentrated at the former votchinal factories.

64 V. Smidovich, Materialy dlia opisaniia g. Tuly. pp.50-53.
Only there does one encounter the type of fundamental (korennoi) factory worker, alienated from the land and farmstead, having nothing to his name except the strength of his own hands - accustomed to only one type of work, and except for that having no other source of even the scantiest existence. In the fundamental factory population, the occupation of factory work was passed on and is passed on hereditarily from grandfather to father, and from father to son... investigating the physical well-being of the factory worker, [the investigator] usually is dealing with two successive generations of former serf-factory workers.66

By the 1880s these factories had fallen far behind all others in their level of output, rates of growth and adoption of technological advances. As will be seen in later chapters, their levels of labour unrest were substantially lower than those of other industries, even though wages and working conditions were generally worse.

In short, in the context of Russian industrial development, the existence of second generation or "hereditary" factory workers might be associated with traditionalism and backwardness rather than progress and change.67 The evidence discussed above is far from conclusive, but its ambiguities are great enough to cast doubt upon any mechanistic model of economic and social development.

Conclusion

The movement of greater numbers of women into the industrial centres of Tula might have encouraged, in the long run, the formation of new family units, permanently rooted in the city or

factory. In the short run, however, older traditions seem to have persisted. The influence of the urban or industrial setting upon family life seems to have been primarily negative or disruptive, expressed in such patterns as later marriage and smaller families. The women who came to the factory included a large proportion who were either too young or too old to marry, and those who were of marrying age showed a higher rate of labour turnover and a greater tendency to depart from the factory after a few years. Those who came and stayed were often the ones whose position in rural society was the least secure, that is, older women without families.

The conditions of city and factory life in Russia as in many other countries were such as to discourage the development of family life among workers. Unlike the Russian city-born population or the working class of other industrial countries, however, the Russian workers had an alternative to maintaining their families in the city. As was suggested in Chapter Three, the relationship between the Russian city and countryside was fluid, with a constant two-way movement of migrants existing between the two. The present discussion has tended to reinforce that impression. Workers who were unable to raise families in the cramped factory barracks would still support a wife and children in the village where a land allotment, however meagre, provided a certain measure of security.

The suggestion that village ties remained important should not be taken as a denial of the impact of factory employment upon the traditional way of life. A woman who earned her own wages at the factory must surely have had a different outlook from the one who tilled the soil beside her husband. The horizons of the peasant village were narrow indeed and the patriarchal bonds strong; in this setting the experience of factory work might have been a kind of liberation.
The higher proportion of unmarried women in Tula should perhaps be seen as evidence that the traditional authority of fathers and husbands over women was weakening.

Surely, too, the family which was divided between village and factory must have been very different from the wholly rural one. In the absence of direct evidence, we can only speculate on the significance of children being raised away from their fathers or mothers, or of sons and daughters becoming independent wage-earners. Such factors also must have weakened patriarchal authority.

Nevertheless, the reader should remember that these patterns were not entirely new. In the Tula region, peasants had been travelling to factories long before the abolition of serfdom. The half-rural, half-industrial family unit which has been described was, by the end of the nineteenth century, a long-standing tradition. While we must recognise its disruptive influence, we should also be aware of its stability.
Chapter 5

Organisation and Protest
Some degree of organisation is inherent in any kind of worker protest. As with any social action, it involves expectations oriented toward the behaviour of others and a differentiation of roles. Even crowd behaviour has its rudimentary patterns that take shape through interaction. Worker protest, no matter how simple and uninstitutionalised, always goes beyond crowd behaviour, because there is a preexisting social relationship of some kind before the emergence of the protest - networks of friendship, prestige hierarchies of individuals and occupations, and the like. Thus, well before the beginnings of modern industrialisation, industrial workers in Russia had organised delegations of petitioners to the tsar (or other political figures) to seek redress of their complaints.

Capitalist industrialisation created the prerequisites for a qualitative change in industrial protest and worker leadership, for all the reasons that Marx and many others have listed. Firstly, worker protest came to concern specifically industrial issues: wages, authority relations within the factory, the enforcement of rules, and so on. In Russia, industrialisation began to have these effects at about the end of the 1860s, the decade of the great reforms. Until then, worker protest had remained limited, and most unrest was linked to peasant demands unfulfilled by the terms of the Emancipation decree. Such preindustrial demands continued to be heard throughout the period of Russian industrialisation, particularly in areas such as the Urals, where workers were more closely tied to the land. Industrialisation, however, caused a significant shift toward demands connected with the workplace. The implications of this change could be seen between 1869 and 1872 when the first unmistakable signs of major industrial

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unrest emerged in the post-Emancipation period. The first real industrial strike had occurred in Orekhovo-Zuevo in 1863, but in 1869 and 1870 there was a dramatic increase in the number and seriousness of strikes, some of which occurred in technologically advanced factories.

Labour protest in Russia was exceptional compared with other European countries. France was known for its revolutionary tradition, and French workers certainly took a leading part in the great nineteenth century revolutionary events, including 1848 and the Commune. By the last decades of the nineteenth century, however, the French labour movement had been significantly transformed by the growth of large-scale organisation. Even though labour militancy and mass strikes reached new heights in the 1880s with the growth of unions, these strikes were aimed not so much at revolutionary transformation as at state intervention in the workers' favour, and they were basically economic in inspiration. In Russia, huge strikes took place in the virtual absence of organisation, and workers could almost always rely on a harsh government response - if not immediately, at least eventually. Whereas French industrial conflict became gradually (although never completely) institutionalised as part of the political system, even if militancy remained an important aspect of the pattern, in Russia labour unrest had much more unsettling implications: it was understood as a direct challenge to the political regime and the social framework of capitalism.

Russian labour militancy was impressive in its quantitative as well as qualitative dimensions. Even before the 1905 revolution, and

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in the context of the tsarist state, Russia was comparable to other European countries (except England, where the level was higher) in terms of the average size of strikes, the number of workers participating, and the number of work days lost (although because of repression strikes tended to be shorter). With the 1905 revolution, Russia easily took the lead: in that year there were more than three million striking workers. Previously, the highest intensity of any strike movement worldwide had been in the United States in 1894, when more than 500,000 workers took such action.

 Strikes, even mass strikes, are not necessarily a good measure of radicalism, although in Russia they were probably a better indicator of this than in other countries. Russia was distinctive in other ways as well: its labour movement enjoyed a special relationship with the revolutionary parties; the militancy of its workers provoked no splits among them, as it had in countries such as England and Germany (although it did exacerbate splits among the parties); and its relative centrality of a revolutionary tradition in establishing the continuity of the movement. All of these traits made the Russian labour movement revolutionary in a sense not true of movements in other European countries, at either earlier or later stages of development. Nevertheless, it was possible as late as 1871 for prominent tsarist officials to assert that Russia had no proletariat to threaten its social stability.

 In Tula, the years 1860 to 1880 were not marked by any great militancy. Toward the end of the 1870s, however, as elsewhere in

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Russia, radically-minded members of the intelligentsia began to make contact with factory workers in the hope of fomenting revolutionary unrest, a hope which was revived several times during the years of the present study. Meanwhile, the "workers' question," which had been debated behind closed doors since the 1850s, acquired a new urgency in the late 1870s and early 1880s. The Factory Laws of 1882, 1885, 1886, and 1897, as well as a bevy of local and national studies, all testify to the tsarist government's mounting concern over the conditions of industrial life and the threat which these might pose to social stability. The late 1890s marked another significant turning point in governmental awareness of the labour question, as worker unrest reached new heights with the great 1896-1897 textile strikes in the capital. After these momentous strikes, officials showed unprecedented awareness of the insecurity and harshness of the workers' lives and made numerous proposals to improve their conditions.

In the last decades of the century, Russian officials perceived the potential danger of worker unrest, but they also tended to be optimistic that its pernicious effects could be avoided because of what Sipiagin, soon to be Minister of Internal Affairs, called "the complete independence of our government." They assumed that the autocracy, standing above all social groups, had both the power and the moral right to dictate the shape of the employer-worker relationship, and

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7 I.Kh. Ozerov, *Politika po Rabochemu Voprosu v Rossii za Poslednie Gody*, Moscow: 1906 p.28. "In Petersburg they looked upon the factory as a highly dangerous place, subject to strict supervision. In ministerial circulars [factories were] ordered to report by telegram to the Ministry of Finance about all instances of dissatisfaction and then to make detailed reports; all these matters were considered completely secret; the telegrams which the local factory inspectorate and the Ministry of Finance exchanged were encoded."
8 TsGAOR, DPVI, g 1902, delo 7a, l. 19.
that the workers would see in the state “their steadfast defender, the just and merciful protector which our rural population see in it.” The factory owners had no right to complain about any concessions they would be forced to make, for with the help of the state, they had made enormous profits. With such a powerful state role, it was hoped Russia would be able to avoid class conflict.

It is remarkable how little trust government officials placed in the paternalistic goodwill of employers. They occasionally referred approvingly to, in Witte’s phrase, the “patriarchal cast of relations between masters and workers,” but such statements tended only to be for public consumption. Far more common was the charge that worker unrest stemmed from the factory owners’ exploitation and the workers’ subjugation to an impersonal market. Some officials even explicitly concluded that the interests of the two sides were directly contradictory, a state of affairs, they warned, that was bound to lead to disorders. Nor were many observers blinded by the myth that the Russian workers’ close ties to the land would protect them from the proletarianisation characteristic of Western Europe. Such ideas might have been convincing (though not really accurate) in the 1860s, but by the 1890s it was widely accepted that, as Sipiagin reported, “here there has already been formed, and is growing rapidly, a class of workers cut off from the land and living exclusively by factory labour.”

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11 Sipiagin report TsGAOR, DPVI, g. 1902, delo 7а, l. 17.
In their efforts to explain the accelerating class conflict and labour unrest that they found so foreign to Russian conditions, government officials fixed on two basic causes. Firstly, many traced worker discontent to inadequate wages and intolerable working conditions, consequences of the factory owners’ selfish concern for profits above justice and public order. Sometimes their denunciations sounded much like Marxist rhetoric, as in the March 1898 report of Ministry of Internal Affair's official Panteleev. Employers, he declared, took advantage of the workers’ helplessness to “exploit their labour for their own benefit.” They received “enormous profits” but they paid the workers poorly and “with few exceptions they [did] almost nothing for the improvement of the living conditions of the workers and their families.” Panteleev regarded the conduct of factory owners as especially unjust because the worker “[gave] to the factory all his vital forces,” and this alone made the factory’s prosperity possible. In other words, he propounded a police version of the labour theory of value. Such charges did not go unanswered by the industrialists’ defenders, particularly conspicuous in the Ministry of Finance, who explained the workers’ low wages by their low productivity and meagre needs. Such a view ignored the fact that isolation and a lack of access to social institutions made it difficult for workers to lead a normal family life. They often lived together with other workers of the same sex in crowded quarters in the city, or else

12 TsGIA, fond 1282, opis 1, delo 696, II. 3-4. For similar comments see the 30 September 1896 circular by St. Petersburg governor Kleigel to various police authorities: TsGIA, fond 1282, god 1906, opis 1, delo 700, II. 13-14.
13 This was one aspect of the Ministry of Finance’s 23 June 1898 response to Panteleev’s report. TsGAOR, fond 543, opis 1, delo 509, I. 24. Sometimes, however, Ministry of Finance officials recognised the justice of the allegations. For example, in his report to the tsar on the causes of the 1896 textile strikes, no less a figure than Witte pointed to the deplorable working conditions in the textile factories and the employers’ infringements on workers’ legal rights. For these reasons, he claimed, the workers had no real cause to value their jobs. TsGIA, fond 40, opis 1, delo 48, I. 113.
in factory barracks where there was no privacy and seldom any special quarters for families. Special provisions for childrearing, such as nurseries or kindergartens, were almost nonexistent. And many workers left their spouses behind in the countryside as a result of, for example, the housing shortage.

Workers in all industrialising countries were cut off from major social institutions to some degree. Russia was simply an extreme case of a common phenomenon. Perhaps even more distinctive was the fact that in Russia workers did not have any social institutions of their own upon which they could call for support. Guenther Roth has described how German workers of the late nineteenth century were denied participation in German life as full citizens. Yet they did develop many of their own institutions and a rich subculture, with their own organisations, newspapers, cultural activities, and the like - a phenomenon Roth calls negative integration. Even in comparatively less developed China, traditional guild organisations and employer-dominated associations were far more important than in Russia. Although often conservative in orientation, they did provide some framework for participation, and at crucial times, such as the 4 May movement of 1919, they could help lead industrial protest.

For workers in Russia nothing of the sort could take place. There were mutual aid societies and cooperatives, but these played no great role, partly because they were largely controlled by the

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employers. Apart from these, there was very little. There were no permanent legal worker press or legal worker parties, and no established trade unions able to act freely. The only alternatives were the underground press and organisations, and of these, the great majority of workers were understandably wary in normal times. Notwithstanding their minimal role, the history of voluntary associations, consumer cooperatives, pension and burial funds, and various similar types of mutual assistance, is interesting in terms of the influence these entities had on workers' outlook and disposition toward collective action.

**Mutual aid societies and cooperatives**

Mutual aid societies and cooperatives were the only independent formal organisations which were legally permitted to exist at Russian factories. Their activities should, therefore, reveal a great deal about the workers' ability or inclination to join together for common ends. The present section will examine the voluntary organisations which existed among Tula workers from the mid-nineteenth century until 1900.

In view of the Russian peasantry's reputed communal instincts we might have expected the cooperative movement to flourish on Russian soil. In the villages such traditions as land repartition and mutual accountability (*krugovaia poruka*) as well as the absence of private peasant land ownership were indications that might have made the peasantry receptive to ideas of formal cooperation. Among workers, the tradition of the producers' *artel*, where members pooled

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17 This whole area will be discussed in some depth in the following chapter.
their labour and shared its fruits, was still strong in many areas in the last decades of the nineteenth century. Nevertheless, the cooperative movement, in the sense of consumers' and producers' associations and similar formal organisations, dates only from the early 1860s, whereas similar movements in England and Germany had begun several decades earlier.

Moreover, the ethnically Russian population of the Russian Empire was initially less receptive to ideas of cooperative association than were its neighbours to the north and west. The first consumer cooperative in the Empire was founded in Riga and the first mutual aid society of workers in St. Petersburg was organised by Germans. Among the Baltic peoples and in the Pale of Jewish settlement, mutual-assistance organisations were a direct out-growth of guild traditions going back hundreds of years, whereby craftsmen had provided monetary assistance to needy members and their families.

The earliest Russian consumer cooperatives were organised on a philanthropic basis, under the patronage of wealthy, influential persons. As a result, these societies had relatively little difficulty in accumulating the necessary working capital. They received further encouragement from leaders of the budding zemstvo movement in the late 1860s and early '70s; even the Ministry of Finance was sympathetic to the idea of cooperative association. However, despite

18 The Rochdale Society was founded in Britain in 1844 but individual associations and the Owenite movement had been active before that date. In Germany, Schulze-Delitzsch founded the first credit union in Delitzsch in 1850.
21 V.K Totomians, Kooperatsia v Rossi, p.19. Both the zemstvos and the Ministry of Finance also promoted the establishment of arteli of small producers in these years. Although loans were provided to these groups on very favourable terms, most of the arteli failed, leaving large debts behind. See "Promyshlennye arteli v Rossi," in
these advantages, the first wave of interest in the cooperative movement was short-lived. In the years 1865 to 1870, consumer societies were founded in almost every province. In 1869, twenty-two alone were established but in the entire decade 1871 to 1881 only seven new societies began operations, and many older ones were forced to close their doors.\(^2\)

Competition from private shopkeepers certainly played a major role in the high rate of failure\(^2\) among early cooperatives in Russia, as did organisational and managerial inexperience. The problem of purchases on credit was a major obstacle. Societies were naturally reluctant to risk extending credit to purchasers who might default, yet without credit, the masses of the population who were infrequently paid at their place of work, were effectively excluded from the cooperative stores.

The earliest societies' reliance upon wealthy patrons had its pitfalls as well. Such individuals, motivated by charitable impulses or a desire to keep up with the fashion of the day, often lost interest in the cooperative societies. Small savings on everyday purchases were unimportant to them. They might shop infrequently in a society's store yet expect the store to stock all manner of exotic, luxury items. Attendance at general meetings was often low, again reflecting members' lack of interest. Elsewhere, well-to-do shareholders regarded consumer cooperatives as an investment and tried to maximise their profits. These profits were then distributed according

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\(^{22}\) Soobshchenie Sankt-Petersburgskogo otdeleniia komiteta o ssudo-sberegatelnykh i promyshlennykh tovarishchestvakh, no. 10, St. Petersburg: 1900, pp.42-69.

\(^{23}\) V.K Totomiants, Kooperatsiia v Rossii, p.25.

\(^{2}\) An estimated two-thirds of the 353 consumer cooperatives founded between 1865 and 1895 went bankrupt. V.K Totomiants, Kooperatsiia v Rossii, p.27.
to the number of shares held by each member rather than the extent of his or her purchases in the cooperative store.\textsuperscript{24}

The cooperative movement entered a new phase in the early 1880s as the owners of large factories began to promote the organisation of consumer cooperatives among their employees. Here, many of the obstacles which earlier societies had encountered were overcome, especially the problem of credit, since the factory payroll office could deduct the appropriate sums from workers' wages. By the turn of the century, the total number of factory-based consumer cooperatives in the Empire was no more than a few hundred, but these were located at some of the largest and most modern enterprises in the country: the Putilov and Obukhov works in St. Petersburg, the Nikolskaia manufaktura (Morozov) in Orekhovo, and in the Moscow region, such prominent factories as the Kolomna machine-building works, the Moscow metal works, the Prokhorov Trekhgornaia and Tsindel dye-printing factories. These cooperatives had hundreds, and in some cases, thousands of members, and sold hundreds of thousands of roubles' worth of foodstuffs and supplies annually.

Mutual aid societies operated on a different basis. Instead of members purchasing a share as a one-time entry fee in the organisation, these societies accumulated their funds (\textit{kassy}) through regular contributions from members. Funds would then be paid out to members or their survivors in the event of disability or death, on terms spelled out in the associations' charters. As noted above, such organisations flourished among Baltic and Jewish craftsmen. In Russia proper, they were most common in the Urals and among railway employees, where participation was, in fact, mandatory for all

workers and clerical personnel. In central Russia, a small number of associations of this type existed at large factories but their membership was usually restricted to white-collar and supervisory personnel (sluzhashchie, mastera). An exception to this occurred in the printing trades, where city-wide mutual aid organisations flourished in several localities, notably Moscow.

The first steps in the operation of a Russian cooperative society were among the hardest. In addition to bringing together a sufficient number of interested persons and somehow acquiring a working capital of fairly large proportions, a society had to submit its charter (ustavy) for governmental approval. Even under the best of conditions this was a time-consuming process. A minimum of six months' delay was usual with some societies having to wait as long as three years before receiving official permission to begin operations.

Charters were closely scrutinised to ensure that the associations posed no threat to public order. In some instances, charters were revised to eliminate the holding of general meetings and to replace them with smaller assemblies of delegates. In other cases, membership requirements were rewritten to exclude rank-and-file workers. Patience and perseverance, it seems, were among the prerequisites of a successful association. An acquiescent or submissive attitude was also helpful. In submitting their charter for transmission to St. Petersburg, the director and founding members of the Prokhorov factory's consumer cooperative designated the governor-general of Moscow as their representative (upolnomochennyi) and authorised him to accept whatever revisions the Ministry of Internal Affairs (Polnoe sobranie zakonov, Series II, vol. 37, no. 37852: Act of January 12, 1862) who was required to consult with "other affected departments."

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25 Until 1897, such charters had to be approved personally by the Minister of Internal Affairs (Polnoe sobranie zakonov, Series II, vol. 37, no. 37852: Act of January 12, 1862) who was required to consult with "other affected departments."
Affairs might suggest: "The administration of the company trusts you in all that you do, and will not contradict or dispute you." This charter was approved in a record two months.

So formidable were the bureaucratic and economic obstacles that ordinary factory workers found it virtually impossible to create organisations of their own. The cooperatives and mutual aid societies which did exist at factories were set up on the initiative of factory owners, managers, or supervisory staff. Notable examples were the cooperatives at the Batashev samovar factory, the Trekhgornaia textile mills, the Moscow metalworking plant, and the Kolomna machine-building plant, all established by the owners or directors of the enterprises.

The pattern of governmental and managerial involvement extended to the everyday activities of associations. The local governor or city administrator (gradonachalnik) was empowered to terminate an association's existence if it was felt it posed a threat to public order, or a general meeting could be adjourned. Under the model statutes of cooperative societies as approved by the Ministry of Internal Affairs in 1897, each society was to report annually to the local governor and the Economic Department of the Ministry of Internal Affairs. Moreover, an agenda was to be submitted to the local police chief in advance of any general meeting and members could not modify this agenda, although the governor or Ministry of Internal affairs could make additions to it.

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26 TsGIA, fond 1287, opis 9, delo 2555, pp.1, 2.
27 I. Kh. Ozerov, Obshchestva potrebitelei, pp.164-166.
Societies were closely scrutinised by officials to ensure that they did not extend their activities beyond the limits of their charters. Consumer cooperatives were obliged to obtain permission from the Provincial Board of Factory Affairs in order to sell commodities other than foodstuffs, and authorities were reluctant to grant such permission. Any outside activities such as dances, concerts, or lotteries had to be approved by the local police chief. The administration of a cooperative or mutual aid society was entrusted to a board of directors (pravlenie) whose members were chosen either by election by a general meeting or an assembly of delegates, or by appointment by the employer. Effective control was usually in the hands of the factory management.

Having briefly reviewed the development of voluntary associations among industrial workers in Russia before 1900, the membership and activities of the organisations which existed in Tula city and guberniia will now be examined. Due to the paucity of existing source material, the discussion is not confined exclusively to the Tula area but refers from time to time to organisations in other localities for the purpose of comparison or clarification. I. Kh. Ozerov, an advocate of close worker involvement in cooperative associations, presented the following as examples of the most successful consumer cooperatives in the Moscow-Tula region: The Batashev samovar factory, where workers were "unprepared" to take an active hand in the society, and supervisory personnel directed the society's affairs, the Kolomenskii machine-building plant, where two služhashchie and one worker directed the cooperative, and the Moscow-Riazan

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30 TsGIA, fond 22, opis 1, delo 352, pp.1, 3, 11.
31 TsGIA, fond 1287.
32 I. Kh. Ozerov, Obshchestva potrebitelei, p.166.
railroad, which restricted its assembly of delegates to members whose annual earnings were over 600 roubles. The average worker earned about one-third of that sum.\(^{33}\)

Just how far managerial involvement could extend is illustrated by the Batashev factory cooperative. To prevent them from squandering their earnings, workers were not allowed to draw a full month's credit allowance all at once. Sobriety was encouraged by the society's refusal to sell alcoholic beverages. Workers protested against this policy, but the factory owner was convinced they would ruin the society if left to their own devices; and to ensure that he had his way, he threatened to deny credit to dissenters.

The rank and file members' influence over associations' affairs was further diluted by the practice, common in mutual aid societies, of honorary memberships for employers and other outsiders. In the societies of sales clerks (prikazchiki) such persons constituted one-eighth of the total membership and had a disproportionately great influence in the societies' affairs.\(^{34}\) Elsewhere, prominent public figures were made honorary members in the hope this would demonstrate the societies' political trustworthiness. Among those elected by the Moscow printers' aid society, for example, were the publicist M.N. Katkov, Moscow governor-general V.A. Dolgorukii, Procurator of the Holy Synod K.P. Pobedonostsev, and Interior Minister D.A. Tolstoi. Such individuals presumably did not play an active role in the governing of the association but the society still sought to "maintain constant ties with them and to seek their protection."\(^{35}\) In general, the institution of honorary membership

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\(^{33}\) I. Kh. Ozerov, Obshchestva potrebitelei, pp.167, 171.
\(^{34}\) S.N. Prokopovich, K rabochemu voprosu v Rossii, p.13.
\(^{35}\) V.V. Sher, Istoriia professionalnogo dvizheniia rabochikh pechatnogo dela v Moskve, Moscow: 1911, p.75.
seems to have encouraged a philanthropic and conservative orientation in the societies.

Factory cooperatives and other related associations thus appear to have been organised and run by persons who were not ordinary workers. All the same, we must still ask whether such workers had any part at all to play in their operation. Who joined the societies and what benefits did they receive? Analysis of membership is complicated by the fact that membership lists and similar records of voluntary associations are scant and incomplete. Some general characteristics of the members can, however, be inferred from other sources.

Membership fees and contributions are especially revealing in this respect. The cost of a share in a consumer cooperative usually ranged from five to ten roubles while contributions to mutual aid funds might be as much as one rouble per month. In 1900, textile workers were earning an average of twelve to eighteen roubles per month depending on the particular branch of production, while metalworkers earned twenty-eight roubles per month and printers twenty-five. Under the best of circumstances workers had trouble in making ends meet, and an outlay of several roubles was no small matter. It is not surprising to find that the better paid workers played a disproportionate role in voluntary associations. In the mutual aid society of Tula metalworkers in 1907, only 6.8 percent of all members were earning less than thirty-five roubles per month, yet the average

36 The records of some societies have been preserved in the archives of individual factories at Gosudarstvenniy arkhiv Tulskoi oblasti (The State Archives of the Tula Oblast) [GATO].
37 The model statute approved by the Minister of Internal Affairs in 1897 made ten roubles the maximum cost of a share but allowed an additional entrance fee of three roubles. I. Kh. Ozerov, Obshchestva potrebitelei, appendix, pp.291-309, article 13.
38 Varzar, Statisticheskie svedeniia o fabrikakh i zavodakh ne oblozhennykh aktsizmom za 1900g.
wage of all Tula metalworkers was 34.70.\textsuperscript{39} In other associations, members' relative affluence can be gauged by the number of shares which they purchased. More than 500 of the 1484 members of the Kolomna machine-building works' cooperative in 1883 held more than one share, and forty held ten shares each. The 247 members of a consumer cooperative at the Shcherbakov and neighbouring textile factories in Kolomenskii uezd (Moscow guberniia) had invested an average of 56.8 roubles apiece in shares. There the high cost of a share, that is, ten roubles, and the requirement it be paid in one lump sum kept most workers from joining.\textsuperscript{40}

Despite such obstacles, many workers did join cooperative associations and many more traded in their stores. The volume of the societies' sales turn over suggests that members spent a very high proportion of their total earnings at the cooperative stores. However, such figures are misleading and erroneous inferences are possible, as demonstrated by the figures from the Batashev society, where purchases per capita were over 500 roubles or roughly 250 per cent of the average worker's earnings. The obvious explanation is that non-members also traded in the stores. All employees of the Batashev factory, whether members of the cooperative or not, were allowed to make purchases on credit, in amounts ranging from forty per cent to sixty per cent of their monthly wages depending on family circumstances.\textsuperscript{41} As noted above, the factory payroll office could deduct these sums from workers' wages so that the cooperative took no risk. Non-workers were occasionally permitted to trade in cooperative stores but they had to pay in cash.

\textsuperscript{39} Varzar, \textit{Statisticheskie svedeniia o fabrikakh i zavodakh ne oblozhennykh aktisizmom za 1900g.}
\textsuperscript{40} I. Kh. Ozerov, \textit{Obshchestva potrebitelei}, pp.166, 174.
\textsuperscript{41} I. Kh. Ozerov, \textit{Obshchestva potrebitelei}, p.164.
The fact that members and non-members alike spent a large proportion of their income in cooperative stores does not necessarily mean they felt any loyalty toward the cooperative or that the stores were serving their interests. Critics alleged, probably with some justification, that certain factory cooperatives were a reincarnation of the company stores of earlier decades in which workers, needing credit, were obliged to pay inflated prices for inferior goods. In some cases, the purchases they made were just a device for raising cash before payday. Workers at the Tula metal works, having no money to buy vodka, would purchase unwanted goods in the cooperative store and exchange them for liquor in private shops or taverns.

Figures on membership in other types of association including pension and savings and loan associations and similar forms of mutual aid, are not presently available for Tula. However, there is one important exception, namely, the mutual aid society of Tula metalworkers. Its statistics provide several clues as to the members' involvement in the society. In the first place, the statistics support the suggestion that this society served only a small minority of Tula metalworkers. Its total membership in 1900 was 424 or roughly four per cent of all the workers in the metal trades industry of Tula. This constituted a small number indeed, in view of the fact that the society had been operating for forty years and had enjoyed the active support of employers.

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43 TsGIA, fond 22, opis 1, delo 248, II. 9-10 (report of factory inspector L. Lialin).
44 Figures on the membership of railroad employees' pension funds are also available (Zhurnal Ministerstva Putei Soobshenii, 1896, book 2, pp.9 ff.) but as participation in these funds was mandatory for all employees statistics reveal nothing about members' attitudes or degree of participation.
45 GATO, fond 28, opis 1, delo 87, 7-8.
Statistics on the turnover in membership in the metalworkers' aid fund suggest that members felt a strong attachment to the society. In the five-year period between 1899 and 1903, just 9.3 per cent of the members left the association. This figure presents a marked contrast to the pattern observed in other countries. In Germany, for example, where aid societies had tens of thousands of members, the rate of withdrawal ranged from thirty-five to forty per cent per annum. Critics of the Tula metalworkers' society explained this difference as a result of the high dues which were paid by the Tula workers. Members who had paid tens or even hundreds of roubles into the aid fund were reluctant to jeopardise their investment by withdrawing from their membership. For the same reason, they favoured cautious and conservative policies when it came to making payments, and resisted attempts to broaden the association's membership by lowering fees.\(^{46}\)

Thus, in the decades before 1900, the activities of self-help organisations were narrowly circumscribed by employers and the government. Members played a generally passive role in the societies and only a small and probably unrepresentative minority of workers took part in them. In a few extreme cases, these associations actually operated to the workers' disadvantage and became vehicles of repression or exploitation. Their direct influence upon workers' lives therefore appears to have been negative. In the opinion of many labour leaders at the time, cooperatives and mutual aid societies not only failed to support the wider causes of trade unionism and the revolutionary movement but even failed to meet their own stated

\(^{46}\) GATO, fond 28, opis 1, delo 239, 12-13.
objectives, that is, the improvement of the material position of workers.\footnote{S.N. Prokopovich, "Krestianstvo i poreformenneia fabrika," in Velikaia Reforma Moscow: 1911, vol. vi, pp.275 ff. Prokopovich argues that the benefits offered by aid societies were essentially irrelevant to ordinary workers who instead sought their security from the peasant village.}

Notwithstanding this fact, it must be asked whether or not these societies could have had an indirect influence on workers as an example of collective organisation. Records of the labour movement at the turn of the century suggest that, despite the societies' shortcomings, workers were extremely interested in the ideas of mutual aid, and sought to give them broader application. This interest was expressed first in the founding of parallel organisations, cooperatives, mutual aid societies, and savings and loan funds, organised without governmental approval to meet a combination of legal and illegal goals. By the end of the nineteenth century, dissident workers in many localities were attempting to take control of existing, legally operating societies and in several instances they actually succeeded in doing so. To complete the discussion of formal worker organisations this process must now be examined in greater detail.

Illegal mutual aid funds were a prominent feature of the earliest revolutionary organisations of Russian workers, as evidenced by the Northern Workers' Union founded in the late 1870s and the Tochisskii Circle founded in St. Petersburg in the mid-1880s.\footnote{Franco Venturi, \textit{Roots of Revolution}, Weidenfeld and Nicolson, London: 1960, p.551; P.A. Kazakevich, \textit{Sotsial-demokraticheskie organizatsii Peterburga kontsa 80-kh nachala 90-kh godov}, Leningrad: 1960, pp.65-68.} In the latter case, two funds (kassy) were established with the aim of providing assistance to arrested or exiled striking workers and their families. One faction in the Circle sought to broaden the funds' goals and composition as a way of attracting more workers, but police
intervention broke it up before these proposals could be put into effect.\textsuperscript{49}

In the writings of early trade unionists and Social Democrats, occasional references to small, informal aid funds which were formed among workers in the 1890s can be found. Some bore innocent names such as "icon-lamp funds" (lampadnye kassy) and were intended to provide assistance to members and their families in the event of illness or death.\textsuperscript{50} However, more militant goals were sometimes concealed under this innocent facade\textsuperscript{51} and it is difficult to draw a clear distinction between these funds and the strike funds or "war chests" (boevye kassy) which began to appear at about the same time.\textsuperscript{52} These latter funds were created to provide support for striking workers but their activities sometimes extended to the purchase of books and to general mutual aid.\textsuperscript{53}

Funds of this type appeared first among Jewish and Polish workers\textsuperscript{54} but by the mid-1890s they were active in central Russia as well, especially in such cities as St. Petersburg and Moscow. Members of the radical intelligentsia were often enthusiastic promoters of such kassy. In the manner of the earliest study circles (kruzhki), the underground aid kassy drew their members from a single factory or a single work crew or shop within a factory. Funds of this sort had very limited resources and their life expectancy was short.

\textsuperscript{49} P.A. Kazakevich, Sotsial-demokrattcheskie organizatsii, p.48.
\textsuperscript{50} "Istoki professionalnogo dvizheniiia v Rossii," in Materialy po istorii professionalnogo dvizheniiia v Rossii, Moscow: 1924, p.44 (recollections of Ginzburg-Naumov).
\textsuperscript{51} Materialy po istorii professionalnogo dvizheniiia, p.20 (recollections of Kolokolnikov).
\textsuperscript{52} Mironov, "Iz vospominanii rabochego," pp.273-274. The very first such fund in Russia was organised at the Putilov works in St. Peters burg in September 1889.
\textsuperscript{53} Koltsev, Obshchestvennoe dvizhenie v Rossii, p.193.
\textsuperscript{54} Grinevich-Kogan, Professionalnoe dvizhenie v Rossii, p.16.
In the mid-1890s, attempts were made in Tula, Moscow, St. Petersburg and several other cities to combine these small, local units into city-wide aid funds. These efforts were supported by the burgeoning Social Democratic organisations but disputes soon arose over the issue of control of the unified kassy. Advocates of a strong, central organisation, most of them students and intelligenty, clashed with proponents of a more loosely unified coalition of local kassy. The latter group, which consisted mostly of workers, was willing to make contributions to a central fund but insisted that such a fund be controlled by an assembly of delegates from the local units. Undoubtedly this dispute foreshadowed the later split between Social Democrat centralists (the Iskra group) and the "revisionists" (the Economists) but the outcome had little immediate importance for workers, since police soon discovered the central funds and arrested their most active members.55

The issue of worker kassy became a matter of great concern among Russian Social Democrats after 1901 as a consequence of the polemic between the "Iskra" faction and the so-called "Economists." Members of this latter group had been the strongest advocates of the aid funds. The editors of Iskra viewed these funds as incipient trade-unionism, a threat to the more basic political demands which Iskra espoused. In the following years, kassy were widely criticised, not just by Lenin and his followers but by Martov, Sviatlovskii, Koltsev, and many other non-Bolshevik Social Democrats. The latter writers sought to make a sharp distinction between underground kassy with radical goals and above ground funds whose goals were purely

In practice, though, the two types of activity often went hand in hand.

A clear indication of this fact is given by the series of incidents, most of them occurring in the years from 1900 to 1905, in which militant workers attempted to take control of moderate, legally established associations and kassy, and involve them in wider economic and social issues. The consumer cooperative at the enormous Sormovo machine works near Nizhnii-Novgorod provides an especially striking example. As late as 1899, workers there seemed to regard the society with indifference or hostility and the cooperative store became a target for looting during disturbances at the factory. Just two years later, however, a faction of militant workers managed to take control of the entire cooperative through elections.

Similar attempts were made at the mutual aid society of Tula metalworkers, and at the printers' mutual aid funds of Moscow, St. Petersburg, and several other cities. In Tula, as in Moscow and St. Petersburg, the dissident members were unsuccessful but in Nizhnii, Samara, and Odessa the printers' aid funds were taken over by militant members who insisted they should play an active role in the strike movement. Shop clerks (prikazchiki) were another group among whom legal mutual aid societies were well developed. There, too, the cautious, conservative outlook of the older generation was

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57 Rabochee dvizhenie v Rossii v XIX veke, vol. IV, part 2, pp.308-309.
58 Koltsev, Obshchestvennoe dvizhenie v Rossii, p.192.
59 G.D. Bakulev, Tulskaia promyshlennost. Istoriiko ekonomicheskii ocherk, Tula: 1952, p.34; and V.V. Sher, Istoriia professionalnogo dvizheniia rabochikh pechatnogo dela v Moskoe, Moscow: 1911, p.75.
challenged by militants, first in Moscow and then nationally. National conferences of mutual aid associations were held in 1897 and 1906. At the first two, the majority of delegates refused to discuss broad issues such as workers' living and working conditions but by 1906, their resolutions had acquired what Sviatlovskii termed with approval "a distinctly proletarian character." In at least two cases, direct government intervention into the affairs of these mutual aid societies was deemed required. The first such incident occurred in the Ural mining centre of Zlatoust in 1897, where workers demanded their association be given a voice in disagreements over wages. In Kharkov in 1900, the city-wide mutual aid society was threatened with dissolution by the police when its members participated in a May Day demonstration. The chairperson of the society, Rudiak, was actually exiled from Kharkov a few days later.

The recollections of a St. Petersburg metalworker under-score the Russian Left's contradictory attitudes toward voluntary associations: "Although the conscious workers, who were occupied in revolutionary work, placed little hope in the [Obukhov works'] consumer cooperative, all the same they took an active (goriachee) part in [its] elections." Their action can be explained in several ways. Firstly, such associations, despite their shortcomings, were the only open forum which was then available. Underground organisations could survive only by observing the strictest conspiratorial

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60 *Materialy po istorii professionalnogo dvizheniia v Rossii*, Moscow: 1924, pp.28-29, 15-16.
61 Sviatlovskii, p.32.
62 Koltsev, *Obshchestvennoe dvizhenie v Rossii*, pp.197-198
63 Mironov, "Iz vospominanii rabochego," p.275; *Rabochee dvizhenie*, vol. IV part 2, p.622.
64 Mironov, "Iz vospominanii rabochego," p.272.
precautions and this effectively precluded the creation of mass organisations. In this situation, legal kassы and cooperatives could provide a camouflage under which trade-unionist or revolutionary demands could reach a wider audience. A second reason for the "conscious" workers' participation in legal organisations was the extent of the latters' financial assets. As noted above, the mutual aid society of Tula metalworkers' kassa amounted to some several hundred thousand roubles by the turn of the century and other associations were similarly endowed. At a time of strikes and lockouts, the more militant workers undoubtedly dreamed of putting this money to what they considered better use. Consumer cooperatives, too, were a weapon in time of strikes. As long as they were controlled by the factory administration they were certain to refuse credit to striking workers but the hope remained that this power could be wrested from the employer and used to the workers' advantage.

In practice, though, such hopes were rarely realised. As indicated earlier, legal organisations were closely controlled from without and within by government and employers respectively. "Conscious" or militant workers surely must have realised that the cards were stacked against them and that their own activities within the organisations could not escape the attention of the police. Yet despite their shortcomings, the idea of legal associations continued to attract the large majority of less militant workers.

As will be seen later, the 1880s and '90s were a period of ferment among Russian workers. One notable development was the growing interest in unification reflected in the many short-lived strike committees, "war chests", and similar small, illegal

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65 Materialy po istorii professionalnogo dvizheniia v Rossii, Moscow: 1924, pp.36-37 (remarks of Adamovich).
organisations. Great numbers of workers were becoming critical of their surroundings, willing to act forcefully and, if necessary, illegally in order to make their grievances felt.

Social Democratic ideas and leadership played an important but not predominant role in this movement. Workers' responses to such activity ranged from enthusiasm to suspicion. When the idea of city-wide kassy was raised, many articulate workers fought to maintain local, that is, worker, control over funds and resisted what they saw as an usurpation of authority by members of the intelligentsia. The workers' aims, then, were not the same as those of the radical intelligentsia. Rightly or wrongly, many workers were willing to consider alternatives which the radicals rejected. Thus, even though consumer cooperatives and mutual aid societies were usually "company unions" or worse, the idea of voluntary association continued to appeal. This is not to say that workers' underground kassy were modelled on legally constituted factory kassy. Rather, the same feelings which led workers in some localities to form independent organisations led others to look to "company unions" for an improvement in their lot.66 Radical workers, such as Babushkin and Mironov were sometimes obliged to modify their stance and follow the lead of their less "conscious" peers.

The experience which workers gained in such organisations, whether worker or management-controlled, seems to have been mostly negative. If a kassa were truly independent, its resources were usually too small to be effective. If it were large and rich it was likely

66 Schneiderman concludes his description of the Moscow Zubatovshchina with the observation that workers participated in police-sponsored aid societies "to the extent that they provided tangible benefits" when these were not forthcoming, their interest quickly ebbed. Jeremiah Schneiderman, "The Tsarist Government and the Labour Movement: The Zubatovshchina," p.341.
to be controlled by the factory owner or a prosperous, conservative minority. If dissident workers did manage to take control of a wealthy, well-established kassa or association, the police were certain to step in and terminate its operations.

Despite the above, though, these associations were a lesson in concerted action and organisation which would be applied to future events. According to one veteran trade-unionist, they were a "source," but not an "element," of the Russian trade-union movement.67

A far less controversial explanation for worker unrest was the insidious influence of outside agitators acting on the basis of ideas imported from the West. According to this view, the workers were loyal to the tsar but also ignorant and susceptible to outside manipulation. Thus, for Pobedonostev, the powerful reactionary adviser to the last two tsars, "our workers are in large part an ignorant mass, capable of taking in any kind of false teaching, be it of a religious or purely economic nature. It is enough to point to the multitude of our people's sects and the extreme stupidity of the contents of their teaching." Despite the inapplicability of Western ideas to Russian conditions, it was thought that these "uncultivated souls" could easily be convinced to embrace subversive ideas.68 For some observers, the

67 Materialy po istorii professionalnogo dvizheniia v Rossii, Moscow: 1924, p.50 (remarks of V. Iarotskii).
68 Komissiia dlia..., p. 13. For Sviatopolk-Mirskii (soon to be named Minister of Internal Affairs) the most basic causes of worker unrest were the tireless labour or revolutionary elements who had formed a cadre of revolutionary workers, "far from cultured and extremely worthless in a mental sense." These revolutionary workers, in turn, operated on the mass of workers, who had no real understanding of the ideas they preached. TsGIA, fond 1282, opis 1, delo 699, I. 14 (June 1901). Such views were in complete harmony with the bureaucracy’s traditional disdain for individual judgment, particularly in the case of the lower classes. Alexander III’s government had a special department to censor theatrical works in popular theatres, for, “because of the level of their mental development, opinions, and ideas, simple people [were] often capable of completely misinterpreting things that present no temptations for
employers' economic exploitation acted together with outside agitators to make the workers all the more susceptible to these "absurd" Western teachings. Ministry of Finance officials tended to single out the influence of outside agitation for special attention, thus deflecting the blame from the industrialists.69

Both of these analyses, by far the most frequently given explanations of worker unrest before the turn of the century, presumed that industrial protest was somehow artificial or unnatural in Russian conditions, and was, instead, a symptom of moral turpitude on the part of outside agitators or of government ineffectiveness in controlling employers. Occasionally, however, another note was sounded: the acceptance of worker protest as a natural consequence of the basic traits of capitalist industrialisation, especially the emergence of a more urban, literate, and sophisticated cadre of permanent industrial workers exposed to the risks and uncertainties of market relations. Various reports referred to the political unreliability of the fully urbanised and proletarianised workers, who were seen as much more inclined to embrace subversive ideas.70 A great many officials deplored the consequences of these changes, hoping to combat them with stronger police measures, but some also came to adopt the view that conflict was inevitable in a capitalist society. Witte, for example, argued that factory disorders were of two kinds: one arising naturally on the basis of contractual relations and the other instigated by criminal educated people." Quoted in P.A. Zaionchkovskii, Rossiiskoe Samoderzhavie v Kontse XIX Stoletiiia, Moscow: 1970.

69 TsGAOR, fond 543, opis 1, delo 509, II. 26-30. Also see Witte: "The basic main cause of the observed unrest among the workers is, in my opinion, outside propaganda," TsGAOR, DPVI, 1897, delo 43, I. 10.

70 For example see Rabochee Dvizhenie v Rossii v XIX Veke, vol. 2, part 2, p.635 edited by A.M. Pankratova, Moscow: 1950; TsGIA, fond 150, opis 1, delo 646, II. 44-45; TsGIA, fond 1284, god 1898, opis 223, delo 59, I. 4-5.
propaganda. In his opinion, conflicts of the first type should be resolved by the factory inspectorate without police intervention and those caused by political agitation should be combated with the most forceful of measures.71 Although the division between economic and political conflict was already somewhat artificial in 1897 Russia, Witte’s basic insight that disorder was inevitable in capitalist societies constituted a profound challenge to the time-worn governmental assumption that all social protest - indeed, virtually all concerted group action - infringed upon social order and should be prohibited. Several years would have to pass before this insight could be fully appreciated and translated into significant new directions in labour policy.

From a discussion of voluntary associations we will now examine in detail the strikes, protests, and related incidents of unrest which occurred among Tula’s factory workers in the years 1880-1900.72

71 TsGAOR, fond 543, opis 1, delo 509, l. 30 (early 1897).
72 The major work on this period is the documentary publication A.M. Pankratova (ed.), Rabochee dvizhenie v Rossii v XIX veke. Sbornik dokumentov i materialov. Moscow-Leningrad: 1951-1963 vols. 1-4, which consists of selections from the State Historical Archives of the Soviet Union. With the exception of this publication, the strike movement per se in the last decades of the nineteenth century has received relatively little serious attention from Soviet scholars. A general review of labour unrest from 1861 to 1917 is provided by S.G. Strumilin, “Zabastovki i revoliutsiia, 1861-1917,” in his Ocherki ekonomicheskoi istorii Rossii, Moscow: 1960, pp.524-544. A closer and more critical examination of the strike movement throughout Russia is the pre-revolutionary work of V.E. Varzar, Statisticheskie svedeniia o stachakh rabochikh na fabrikakh i zavodakh za desiateletie 1895-1904, St. Petersburg: 1905. Other important works on labour unrest include F.G. Matasovoi, Stachki 1881-1895. Sbornik Dokumentov Moscow: 1930; K.N. Iakovlev, “Zabastovnochnoe Dvizhenie v Rossii za 1895-1917 g.g.” in S.G. Strumilin (ed.), Materialy po statistike truda, Moscow: 1920; S.G. Strumilin, “Zabastovki i Revoliutsiia,” in S.G. Strumilin (ed.), Materialy po statistike truda, Moscow: 1920, pp.1-6; A. Shabalov, “K istorii stachek sredi fabrichnykh rabochikh. V nachale semidesiatyky godov 19 go veka,” in Arkhiv Istorii truda v Rossii, Book 3 Petrograd: 1922, pp.42-150; A.Kats, “Khronika professionalnogo i rabochego dvizheniia v Rossii (1870-1899 g.g.),” in Materialy po istorii professionalnogo dvizheniia v Rossii, Moscow: 1924, pp.295-331; A.Kats, “Khronika professionalnogo dvizheniia rabochikh v Rossii (1890-1903 g.g.),” in Materialy po istorii professionalnogo dvizheniia v Rossii, Moscow: 1924, pp.166-204; and Maks Gordon, Ocherk Ekonomicheskoi Borby Rabochikh v Rossii. Iz istorii volnenii i zabastovok, Leningrad: 1924. For a description of strikes that occurred in Tula in the period 1900 to 1905 refer to V.N. Ashurkov, “Stachechnaia Borba
Source material for Tula labour protest

For the years 1880-1900, the primary source material for the data referred to in this chapter comes from various agencies of the tsarist government. The principal source for labour protest can be found in the reports of the police and Okhrana, with the Factory Inspectorate, whose records are part of the archives of the Ministry of Finance, also being of great importance. Leaflets, proclamations, and various publications of illegal Marxist groups constitute another source. Finally, other important sources are the archives of the Ministry of Justice, other tsarist government agencies, the Russian legal press, and emigre revolutionary publications.

The authenticity of the documents appears beyond question. Almost all of the documents emanate from persons who were eyewitnesses to the events described, or who interrogated those eye-

witnesses. However, the reliability of the various accounts is quite a different matter. The characteristic concerns of police officials, for example, might have led them to exaggerate the revolutionary threat posed by labour disturbances, or to put undue emphasis upon the role of outside agitators. Authors of revolutionary leaflets, on the other hand, would naturally be inclined to emphasise the solidarity and determination of workers, as well as the brutality of police. Fortunately, the summary details of an incident, name of enterprise, type of incident, dates, number of participants, would be least likely to be affected by such bias, and it is these details which the present chapter will attempt to analyse.

Since strikes were illegal at this time, the tsarist police had every incentive to keep a close watch over the workers. Nonetheless, some incidents might still have gone unrecorded. For example, it is rare to find references to incidents involving twenty-five workers or less. Does this mean that small-scale incidents did not occur, or that staff-management relations in small-scale enterprises were harmonious, or was it that the police simply paid less attention to them? Similarly, we know of incidents in which employers tried to keep police and other officials from interfering in labour disputes, fearing that this would only complicate matters. Were there perhaps cases in which employers succeeded in keeping incidents secret? Since questions such as these cannot be answered with any certainty, the only possible response is to treat our sample of strikes with caution, especially when discussing factories which were small or so remote as to escape the notice of government officials. Most of the factors which might have distorted the sample, however, would probably have remained constant over time; this suggests that changes and trends in
the data were reflections of real events, and not of differences in the pattern of reporting them.

The "Chronicle of events" section of Soviet publications on the workers' movement overemphasises the role played by underground Marxist organisations. In particular, the activities of Lenin and his associates in St. Petersburg and Moscow are minutely recorded, while the activities of non-Marxist groups such as the narodnik circles are hardly mentioned at all. Once again, caution and scepticism are required, all the more so since many of the activities in question were confined to a narrow circle of intelligentsiya and had little or no direct impact upon workers.

With these reservations in mind, let us turn to an examination of the data. We will begin by chronicling incidents of labour unrest in Tula, and will then try to relate them to the themes and questions which were raised in previous chapters in order to determine what the strikes and protests reveal about the workers' responses to their changing surroundings. Altogether, only six actual incidents of labour protest in Tula city and province in the years 1880-1900 have been identified, seven if we include the seminal strike of 1876, details of which are unfortunately sparse.

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Strikes in Tula

1876

Dmitrii Fedorovich Nekrasov reputedly organised the first strike to have taken place in Tula. The strike occurred amongst railway workers in 1876. Nekrasov commenced his agitational activities in 1874 and by 1886 had become a Social Democrat. In 1893 he became a member of a *narodovoltsy* circle in Tula and, according to police sources, ceased his revolutionary activities in 1903.74

1891

A report of the Tula governor to the Ministry of Interior regarding a strike at the cotton-spinning factory of E.S. Kariakin, located near the rural village of *Malom Redkine*, in Kashirskom *uezd*, Tula province, states that 320 workers took strike action when their list of grievances was rejected by the factory administration. Work had ceased on 24 September 1891. The strike, he emphasised, was non-violent and the situation calm.

As a result of the strike, the *uezd* police chief, an assistant to the Factory Inspector for the Moscow region, and the head of the Factory Inspectorate for Tula province were sent to the area to investigate the disturbance. Upon their arrival they explained to both the factory owner and the workers their "legal" obligations.

74 GATO fond 3097 opis 3 delo 2 kor. 19 1893 g.
The workers' list contained the following grievances and demands: 1) that the wage being paid was too low and should be raised; 2) that the pricing of food products be taken over by the artel instead of the factory shop whose prices were too high; 3) that if not there be a reduction in the price of food products to a level comparable elsewhere, or workers be allowed to buy their food products wherever they chose; 4) that the factory administration no longer compel workers to buy their food requirements from the factory shop; 5) that the fines for damaging goods were too high and that fines were too often imposed; 6) that as the leftovers from the workers' tables were fed to the factory owner's pigs, the owner should reduce the canteen fee by fifteen roubles a month; 7) that the foreman who received the goods [produced by the workers], refrain from being extremely rude and impertinent, and from using indecent language; 8) that the pond from which they took water for cooking their food was too dirty; 9) that the toilets were too great a distance from the workers' sleeping quarters, and as such at night workers had to brave the extreme cold; 10) that the sleeping quarters were too cramped and overcrowded, and that married men should not have been housed together with single men; 11) that ten per cent of workers' pay not be deducted; 12) that they be allowed to buy their food products from, and live in, places of their own choosing; 13) that the level and frequency of fines be reduced; 14) that the foreman be replaced; 15) that the piece rate be slightly raised; 16) that wages not be reduced prior to Easter; and 17) that workers participating in the strike not be dismissed.

The investigation by the respective government officials concluded that the worker grievances were in fact justified, except those pertaining to item Nos. 5 and 11 to 17, the infractions of which
no evidence could be found. It was found that the fines in question were infrequently levied and when they were imposed they were minimal, and that any deductions, other than the ten per cent referred to, could not be seen in the wages books. In view of the above findings, the factory owner agreed to: 1) maintain until 1 January 1892 the present level of wages, without a ten per cent reduction; 2) allow workers to arrange for themselves both their own accommodation and food requirements, and to stop the distribution of their leftovers; 3) transfer the foreman to other duties; 4) not dismiss any worker, except by due process of the law, until 1 January 1892; and 5) gradually increase the wage rate and not deduct any wages from workers for the strike period.

The workers resumed work on 28 September 1891.75

1896

A report by Factory Inspector Metelskii outlines a strike at the sugar refining factory of Tereshchenko by 102 workers (out of a total workforce of 576), on the 25 September 1896. He described the strike as one that was "peaceful in character." Workers who had originated from the neighbouring Orlov province found their fixed-term employment contracts disadvantageous and burdensome. The workers were also unsuited to the work required by the factory, the nature of which was not specified in their original contracts. Metelskii expressed the opinion that the strike was not expected to spread any

75 F.G. Matasovoi, Stachki 1881-1895 Sbornik Dokumentov Moscow: 1930, pp.154-156; Ocherki Istorii Tulskom Organizatsii KPSS, p.13; and TsGAOR fond 102 opis 48 delo 66 ch. 37 1891.
further than Tula, and that despite the strike, the factory was able to continue production.\textsuperscript{76}

\textbf{1898}

In a report of strikes in Tula province, a strike is listed for the factory of R. Gill, located in Krapivenskii uezd, which employed seventy-one workers. On the 1 June 1898, fifty-two workers of this cement works took strike action in relation to a wages claim. Whilst the matter was resolved in favour of the workers, the fifty-two workers involved were arrested.\textsuperscript{77}

An economic strike occurred in October 1898 which involved 500 workers at the samovar factory of Batashev. The workers demanded an increase in the wage rate, the correct payment of wages, the end of deductions from their pay for lighting and the dismissal of two factory masters.\textsuperscript{78}

\textbf{1899}

Under the reputed guidance of the Tula group of the Russian Social Democratic Labour Party a strike was conducted at the Tula Cartridge factory. A leaflet was produced containing the grievances of each individual section of the factory. The strike lasted for two days, resulting in a satisfactory settlement in favour of the workers.\textsuperscript{79}

\textsuperscript{76} TsGAOR fond 102 opis 53 delo 15 ch. 38 1896 p.3; TsGIA fond 23 opis 17 delo 312 1898 g. p.61; and TsGIA fond 23 opis delo 22 pp.3-34.
\textsuperscript{77} TsGIA fond 23 opis 17 delo 312 1898 g. p.60; and TsGIA fond 23 opis 30 delo 22 pp.44-50.
\textsuperscript{78} Put Borby i Pobed, p.22.
\textsuperscript{79} Put Borby i Pobed, p.23.
At midday on 28 January 1900 a report was issued which informed the workers of the samovar factory of V.S. Batashev the days in which their pay would be paid for the current year to 31 December. The report was signed by the owners of the factory and countersigned by I.V. Bartenev, Factory Inspector for Tula province. This schedule Bartenev stated, did not infringe upon the current practice in relation to the entering of earnings in the workers' wage books. What the agreement did, in fact, determine was that the period in which earnings were calculated and then entered in the workers' wage books would be shorter.

The important aspects of this schedule were that entries into the workers' wage books would be made on the first and fifteenth of every month, and that wages for the first half of each month would be paid between the sixteenth and twenty-third, while those for the second half of the month would be paid between the first and tenth of the month. According to the schedule, the latest date for the payment of wages for the first half was fixed on the twenty-second of the month (and then only once a year), and those for the second half fixed on the sixth of the month. Furthermore, the factory management thought it suitable to pay out wages on the eve of public holidays, namely Saturdays, which meant in practice that a number of payments would occur outside a two-week period, often being as late as eighteen to twenty-one days. These circumstances caused a great deal of dissatisfaction amongst the workers.

This discontent manifested itself in the form of a strike, which Bartenev surmised was based upon two factors, the first of which involved misunderstandings regarding the schedule of wage
payments. He cited an earlier example of worker discontent to illustrate his case. On that occasion the workers agreed to resume work under the schedule provided that there were longer periods in between which their earnings were calculated, and that half of such earnings be paid for provisions. Unfortunately, Bartenev notes, the factory pay office did not always adhere these periods of payment. The second factor that influenced the Batashev workers to strike was, according to Bartenev, the departure of the factory manager F.F. Zanftleben for a month abroad on the eve of the very day the new schedule of wage payments was to come into effect. The workers perceived this action as an attempt by factory management to evade any possible negotiation on the schedule with workers.

The strike involving some 360 workers commenced at nine o’clock in the morning on 29 January 1900 without any prior consultation, Bartenev recalls, with either himself or the factory management. The workers demanded that wages should be paid without fail on the first and fifteenth of every month.

As a consequence of hastily called discussions between Bartenev and the factory management, various concessions were made. An offer to pay out wages over a longer pay period and to set aside a proportion of wages for provisions was put to the workers, who responded to the proposal with utter scepticism. The workers feared that the factory administration would fail to honour these commitments. By mid-afternoon at around three o’clock the workers went home for dinner and, in view of the closeness of the hour to the usual time for cessation of work (before holidays work ceased at six o’clock), remained there.

The strike, Bartenev observed, was entirely of a non-violent nature and the situation was calm. He noted that the strike leaders
were mature workers with a long work history at the factory. They assured him that on Monday 31 January 1900 a return to work was highly probable. This positive outcome was made possible after a Sunday meeting, initiated by the Governor of the province, between one of the joint owners of the factory and representatives of the striking workers. The Governor proposed that the factory management and workers enter into a dialogue on the various contentious issues and expressed the opinion that the factory management were prepared to listen to the workers' grievances.

On Monday 31 January 1900 the workers who participated in the strike at the samovar factory of Batashev returned to work.80

Types of incident

Table 5-1 shows the distribution of the various types of incidents over the twenty-one years of the study.81 Several general

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80 Report of I.V. Bartenev Factory Inspector Tula province to the Department of Trade and Manufacturing on the strike at the samovar factory of V.S. Batashev in the city of Tula in Rabochee Duizhenie v Rossii v XIX veke. vol. 4, 1895-1900, part 2, 1898-1900, Moscow: 1963, pp.545-547; and TsgIA fond 23 opis 30 delo 22 pp.54-61.
81 The sources refer to six types of incidents when cataloguing labour protest. The first and most pertinent category for Tula is that of strikes. The second type is listed in the sources as “disturbance” (volneniia, lit. "agitation") or "disorders" (bezporiadki). These terms were applied to cases of unrest which did not involve work stoppages and included were such events as rumours, threats, scuffles, and sometimes impromptu mass meetings at which workers discussed some particular grievances. Third on the list are complaints of all sorts, whether made to the police, factory inspectors, other governmental agencies, or employers. These were sometimes anonymous, but at other times formal petitions with many names were presented. The fourth type of incident is listed as revolutionary activity, and includes the formation of underground propaganda circles (kruzhki), strike funds, libraries, the printing and distribution of leaflets, proclamations and other illegal literature, and the organising of mass meetings (skhodki) and demonstrations. Incidents of this type differ from those listed as disturbances in that skhodki were planned rather than spontaneous, and generally involved underground revolutionary activists as well as rank-and-file workers. Fifth and sixth on the list of types of incidents are mass departures to the countryside and riots respectively. In some cases, incidents involved several different forms of protest. In the course of a strike, for example, workers might riot or submit petitions or depart for the countryside.
trends are apparent. In the first place, no incidents of labour protest are evident in Tula prior to 1891, and of the forms of protest which occurred during the second decade of the study took the form of strikes, rather than complaints and mass departures, suggesting that the working class was coming to favour more disciplined and militant types of behaviour.

The majority of incidents occurred in only a relatively short time period: 1896-1900. These years account for five out of six incidents in the sample. The same pattern is evident when we evaluate the number of protest incidents in the principal branches of industry. In the metal industry, all instances of protest occurred in the period 1896-1900. A breakdown of incidents according to location shows that the provincial capital city, Tula, accounted for two-thirds of all incidents of protest in the study period and eighty per cent in the specified period.
Table 5-1: Strikes and other types of labour protest in Tula 1880-1900

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of Incident</th>
<th>Number of participants</th>
<th>Location</th>
<th>Name of Enterprise or Employer</th>
<th>Branch of Industry</th>
<th>Duration</th>
<th>Grievances or Issues</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1896 - Sept.</td>
<td>Strike</td>
<td>102</td>
<td>Tula</td>
<td>Tereshchenko</td>
<td>Sugar-refining</td>
<td></td>
<td>Wages - Terms of contract</td>
<td></td>
</tr>
<tr>
<td>1898 - June</td>
<td>Strike</td>
<td>52</td>
<td>Tula gub. Krapivenskii uezd</td>
<td>R. Gill</td>
<td>Cement works</td>
<td></td>
<td>Wages</td>
<td>Resolved in favour of workers</td>
</tr>
<tr>
<td>1898 - Oct.</td>
<td>Strike</td>
<td>500</td>
<td>Tula</td>
<td>Batashev</td>
<td>Metal</td>
<td>3 Days</td>
<td>Wages - Dismissal of two masters Company store</td>
<td></td>
</tr>
<tr>
<td>1899 - March</td>
<td>Strike</td>
<td>-</td>
<td>Tula</td>
<td>Cartridge</td>
<td>Metal</td>
<td>2 Days</td>
<td>-</td>
<td>Resolved in favour of workers</td>
</tr>
<tr>
<td>1900 - Jan.</td>
<td>Strike</td>
<td>360</td>
<td>Tula</td>
<td>Batashev</td>
<td>Metal</td>
<td>3 Days</td>
<td>Schedule of wage payments</td>
<td></td>
</tr>
</tbody>
</table>


82 The Russian language has two terms for work stoppages: stachka and zabastovka. In the original coding, a distinction was made between the two, but an examination of the data disclosed no differences between them, and the categories were, therefore, merged.
Can we find some general, overall factor or factors which will account for this phenomenon? Changes in the political climate would be a likely explanation, but the years 1880-1900 did not coincide with either periods of political calm or periods of political unrest. Although government policy toward workers was significantly altered by the passage of factory laws in 1882, 1885, 1886, and 1897, the first three of these dates were followed by periods of labour tranquillity, while the last date fell in a time of labour unrest. However, far from causing this unrest, the laws of 1886 and 1897 have usually been seen as the government’s response to the massive strikes of the preceding years - the Morozov strike in Vladimir province in January 1885 and the city-wide textile strike in St. Petersburg in 1896.

In the economic realm as well, the period of labour unrest in Tula would appear to have little in common. The period 1896-1900 fell in the middle of an economic boom. This can be contrasted with the 1880-1885 period of economic depression and stagnation, in which little or no growth occurred and no incidents of labour unrest are recorded. In general, it appears that the years of greatest labour unrest (1896-1900) were also the years of most rapid economic growth.

Between these extremes, there appears to be a correlation between the incidence of strikes and an expanding national economy. Should we conclude from this that prosperity was, if not the chief cause, at least a principal contributing factor in labour disturbances? Since the workers’ share in the fruits of prosperity was minimal this would seem unwarranted. “Wages of workers in textile and other light industries did not rise at all throughout the period [of the 1890s]...the wages of metalworkers rose about 10 to 15 percent... [but] a large part of this increase was cancelled by concomitant increases in
the cost of living." Without materially improving the workers' standard of living, however, the economic boom could have had a direct effect upon their lives through its influence upon hiring patterns. As Columns five, six and seven of Table 5-2 indicate, the years of peak economic growth were also the years of peak employment.

Three aspects of this situation should be mentioned. Firstly, during the years of economic expansion, the total factory population was increasing, bringing many new hands to the factory. This, in turn, might have led to over-crowding and pressure upon housing and other facilities. Secondly, a certain proportion of the new recruits came directly from the countryside and had no previous experience. This group has been often described as highly volatile and prone to violent protest. Thirdly, the years of expansion were years of relative security for the workers. Factories were less likely to lay-off anyone, and workers who left their jobs at one enterprise stood a good chance of finding work at another. This, in turn, might have given workers a sense of security and self-confidence in their dealings with employers, and made them more critical of their terms of employment. In times of economic recession, lay-offs and cut-backs in production might have made workers more anxious to preserve their jobs, however unsatisfactory the terms might have been.

Of these factors, the third would appear to have been the most important in the present sample. The years between 1885 and 1887, in particular, were a period of recovery rather than expansion, which followed a five year depression in which many businesses had failed and many more had experienced sharp cutbacks in their operations.

In this situation, many, perhaps most, of the “new recruits” who were hired were workers with previous work experience, returning to the factories after a period of involuntary absence. Overcrowding of sleeping-quarters, dining halls and other facilities would, in all likelihood, have been under utilised during the years of depression, and the slack would not immediately have been taken up.

At the same time, any change in the number of workers employed would quickly become apparent to all workers, since contracts were customarily renewed at six or twelve month intervals. If, as I argued above, an awareness of such change affected workers’ willingness to protest, we would expect a wave of protest to follow soon after any dramatic improvement in hiring conditions took place.
Table 5-2: Year-to-year distribution of labour unrest, together with indices of trends in the Russian economy

<table>
<thead>
<tr>
<th>Year</th>
<th>Labour Unrest in Tula (number of incidents)</th>
<th>Labour Unrest in Moscow (number of incidents)</th>
<th>Estimated rouble value of output of Russia’s ten main industries (million roubles)</th>
<th>Total Russian Factory Labour Force (1000s)</th>
<th>Work force at Cartridge factory (Tula)</th>
<th>Work force at Tsindel cotton mill (Moscow)</th>
<th>Combined index of economic growth, using 1913 as base year (= 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>15</td>
<td>461.0</td>
<td></td>
<td>1183</td>
<td>1295</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1881</td>
<td>3</td>
<td>487.6</td>
<td></td>
<td>33984</td>
<td>1222</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1882</td>
<td>2</td>
<td>503.4</td>
<td></td>
<td>-</td>
<td>1296</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1883</td>
<td>7</td>
<td>469.8</td>
<td></td>
<td>-</td>
<td>1282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>8</td>
<td>450.7</td>
<td></td>
<td>-</td>
<td>1282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1885</td>
<td>46</td>
<td>428.9</td>
<td></td>
<td>-</td>
<td>1427</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1886</td>
<td>28</td>
<td>426.9</td>
<td></td>
<td>300</td>
<td>1396</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1887</td>
<td>51</td>
<td>465.0</td>
<td></td>
<td>700</td>
<td>1299</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1888</td>
<td>17</td>
<td>527.9</td>
<td></td>
<td>710</td>
<td>1384</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1889</td>
<td>13</td>
<td>507.8</td>
<td></td>
<td>1066</td>
<td>1403</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>9</td>
<td>497.0</td>
<td></td>
<td>1555</td>
<td>1507</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1891</td>
<td>1</td>
<td>495.3</td>
<td></td>
<td>1479</td>
<td>2792</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1892</td>
<td>10</td>
<td>521.6</td>
<td></td>
<td>1830</td>
<td>2729</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td>11</td>
<td>619.4</td>
<td></td>
<td>2033</td>
<td>31.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1894</td>
<td>14</td>
<td>-</td>
<td></td>
<td>2061</td>
<td>35.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td>31</td>
<td>-</td>
<td></td>
<td>2343</td>
<td>36.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1896</td>
<td>82</td>
<td>-</td>
<td></td>
<td>2379</td>
<td>39.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1897</td>
<td>48</td>
<td>908.7</td>
<td></td>
<td>2555</td>
<td>41.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1898</td>
<td>2</td>
<td>44</td>
<td></td>
<td>2757</td>
<td>45.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1899</td>
<td>1</td>
<td>25</td>
<td></td>
<td>2598</td>
<td>55.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>1</td>
<td>15</td>
<td></td>
<td>2500</td>
<td>61.05</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


84 The Tula Cartridge factory commenced operations in 1881.
85 The Cartridge factory did not operate during 1898. Obzor Tulskoi Gubernii za 1898, Tula: 1899, table II.
Such an analysis can provide at least a partial explanation of the surge of labour protest that occurred in Moscow in 1885. In that year, the pace of economic growth was slow; indeed, by some measures no growth at all occurred. After years of depression, however, even a levelling-off of production would have been a very positive factor from the workers’ point of view. In place of the widespread lay-offs of previous years, 1885 in Moscow saw a moderate increase in the number of workers hired, not enough to crowd the barracks or exhaust the pool of experienced unemployed workers, but perhaps enough to overcome the uncertainty and precariousness which workers felt in preceding years.

According to available figures, the total number of factory workers in Russia continued to grow from 1885 to 1887, just as did the number of strikes. After this, a downward economic trend set in. For the following six or seven years, the patterns of economic growth and hiring were uneven, with increases one year and none at all the next. Tula proves to be the exception, experiencing large and consistent growth in employment during this period. Only in 1894-95, with the introduction of the Witte system, did the Russian economy enter a period of sustained rapid growth. The incidence of labour protests, which reached a peak in Moscow in 1887, fell off rapidly in the following year, and remained at a uniformly low level until 1895. This level, however, was never as low as those in the years 1881-84.

If the workers’ sense of security was, in fact, a major determinant of labour unrest, the variable course of industrial production in the years 1888-94 would appear to have inspired little confidence. The years 1895-98, on the other hand, like the period

86 Support for this suggestion can be found in the fact that although the labour market apparently expanded rapidly in the years 1891-92, there was no corresponding
1885-87 (and in a negative way the years 1881-84) showed a continuous, decisive trend in levels of employment and production. This trend began to subside in 1899, and the number of protest incidents dropped sharply. When a new depression set in in 1900, even fewer protests were recorded.

Among the factors which might help to account for the year to year changes in the pattern of protest, at least two others should be mentioned. One is the influence of outside agitation. The years of greatest labour unrest in the 1890s were those in which the radical intelligentsia was most active among the workers. Such activity was not in evidence, however, during the earlier surge of protest in the years 1885-87. In those years, another factor seems to have played an important role, namely, the example of labour protests in other localities. The massive Morozov strike of January 1885 took place in the town of Orekhovo, Vladimir province, just across the river from Moscow province. This incident, which involved approximately 8,000 workers, made a great impression upon the government and public opinion. As we indicated earlier, the number of protest incidents in Moscow city and province soared in 1885 despite relatively unfavourable conditions in the labour market and the economy as a whole. It is possible that the protesters, who seem to have been well informed about events in other localities, were following the lead of the Morozov workers.87

increase in protest activity. At this time, the countryside was in the grip of famine, which caused an exceptionally large number of peasants to flock to the cities and factories in search of wages. The presence of such a large pool of unemployed outside the factory gates might well have discouraged the workers inside from striking, just as lay-offs had discouraged them in other years.

87 Possibly, too, the Moscow police were being especially attentive to the workers' moods in the aftermath of the Morozov incident. It should be noted that the years 1885-86 saw the greatest concentration of "disturbances" recorded in Moscow during the whole of the period 1880-1900. This might mean that local officials were
Of all of the factors which we have been discussing, only the economic ones seem to have operated consistently over the entire period 1880-1900. This does not, of course, mean that economic factors were more important than other factors. The distribution of protest incidents over time tells us relatively little about the causes of these incidents. All of the factors which have been mentioned above had some role to play, but it is to other evidence we must turn in order to decide which of them were the most influential.

Complaints and grievances amongst workers in Tula

In all but one of the incidents in the present sample, the sources provide some indication of the underlying issues. The grievances and complaints which are listed should be seen as a crude and possibly incomplete reflection of the workers' concerns. For example, in the majority of cases cited in the documentary publication *Rabochee dvizhenie v Rossii v XIX veke* only a single issue is listed. Can we then assume that only one issue or grievance was at stake in a particular incident? Evidently not, for the more detailed descriptions of individual incidents almost invariably mention more than one. On the other hand, when lists of many grievances are included, we cannot assume that the workers cared equally about all of them. Typically, an incident would be provoked by a single issue, and in subsequent meetings with factory inspectors, local police officials, or members of the radical intelligentsia, the workers would complain about other aspects of their lives, or put forward other demands.

*reporting rumours and rumblings among the workers which would have been ignored in earlier years.*
Many of these were undoubtedly added as afterthoughts, and would not by themselves have led to an organised protest.88

Under these circumstances, it is difficult to decide which issues were most important at any given moment. In the following pages we will sidestep this question by listing all of the issues which were mentioned in an incident without attempting to establish any sort of ranking among them. This approach will allow us to identify the most important themes through their recurrence on a broader plane and to determine how the pattern of grievances and demands changed over time.

In the total sample for Tula, two-thirds of the cases mentioned only one issue, while the remaining third mentioned only two issues. These are summarised in Table 5-1. It is apparent that “economic” issues, that is, issues relating to the workers’ immediate surroundings, as opposed to “political” ones involving some larger polity, were predominant. Matters pertaining to wages accounted for over fifty per cent of all issues, while at the opposite end of the scale, there were no recorded instances of an overtly political nature.

The issues in Table 5-1 fall into four general categories. First and foremost are those which are directly related to the level of wages (fifty per cent of all issues). This group includes, in addition to disputes over wage rates, demands and grievances involving fines, deductions from wages, and alleged abuses in reckoning and payment.

88 The difficulties presented by the sources are illustrated by the documents in Rabochee dvizhenie vol. IV, part 1, pp.625-634 dealing with the Konshin strike in Serpukhov, 1897. A small group of workers began by demanding that wages be restored to their earlier levels. When members of this group were arrested (charged with drunkenness and disorderly conduct) the entire work force of 6,000 went on strike. A factory inspector spoke with the crowd at the factory gates, and took down a list of twelve complaints; after investigating these, he found most to be unfounded. The most serious and justified complaints, according to the inspector, were those dealing with wage reductions, but the basic cause of these, dislocations due to the introduction of a shorter working day with two shifts, was not mentioned by the workers at any time.
The second main group of issues involves working conditions (thirty-three per cent of all issues): hours, terms of contracts, work schedules, schedules of holidays, behaviour of supervisors, election of crew leaders, issuance of passbooks, and schedules of wage payments.

The third group includes all aspects of living conditions: food, housing, the company store, consumer cooperatives and related mutual aid efforts, and pension and disability plans. This group accounted for 16.6 per cent of all issues in the sample.

The fourth category of issues is more heterogeneous. It includes protests against arrests, the firing of individuals, and mass lay-offs; expressions of solidarity with strikers elsewhere; the necessity for respect and polite treatment; and political demands. This group also accounted for 16.6 per cent of all demands and grievances.

Two observations can be made about the waxing and waning of particular issues. The discussion that follows will compare and contrast the cases of Tula and Moscow. In the first place, almost all of the issues which were concentrated in the earlier years in Moscow, for example, were dealt with by the Factory Law of 3 June 1886. This statute imposed restrictions on the terms of wage contracts, prices in the company stores, deductions, fines, and the schedule of wage payments. The fact that these issues were mentioned less frequently in later years would suggest that these particular abuses were curtailed at the factories of Moscow, yet they continued to predominate in Tula. In the second place, the issues of the later years for Moscow at least, seem to reflect a broadening of the workers’ outlook, an increased
awareness of conditions in other localities, and a demand for general reforms.89

Another indication of the workers' changing moods and outlook is the predominance of offensive or defensive demands and grievances. For this reason, issues were divided to distinguish between those cases in which workers were challenging the status quo and demanding that it be changed in their favour (for example, by shortening the working day), and those in which they were defending the status quo against some challenge (for example, a reduction in wages). The latter defensive issues were found to outnumber the former offensive ones in Moscow during the years in which the fewest strikes and incidents occurred: 1881 to 1884 and 1888 to 1894, which were years of depression or economic uncertainty (Table 5-2).90 The years 1885 and 1886 also show a predominance of negative or defensive issues.91 It was only in the remaining years that Tula experienced any worker unrest when it, like Moscow, encountered a greater number of offensive demands than defensive ones.

Number of participants, duration of incidents.

Estimates of the number of participants are available for five incidents in the present Tula sample. The diversity of types of incidents can prove to be problematical in attempting to identify any uniformity of participants. In some cases, distributing leaflets for

91 Although the number of protests was greater, these years were a time of uncertainty in which only limited economic advancement occurred. See Robert Eugene Johnson, Peasant and Proletarian. Chapter 7.
example, the conspiratorial nature involved makes it almost impossible to estimate the number of active participants, much less the number of sympathetic, passive bystanders. At the opposite extreme, we have a number of cases in which participants were clearly identified because of arrest or dismissal from their place of work.

The duration of some kinds of incident is also difficult to calculate. A mood of discontent might develop among workers over a period of weeks or even months, with sporadic outbreaks of one sort or another. After a strike or disturbance had apparently run its course, unresolved grievances might remain to trigger a new confrontation.

These difficulties were less common in the case of strikes than in other types of labour unrest. The beginning and end of a work stoppage could be clearly delimited, and the employer was in a better position to estimate the number of participants. Such estimates are available in a majority of cases for Tula. For the reasons outlined above, and in view of the fact that all of the incidents recorded in Tula during the period 1880-1900 were classified as strikes, the following discussion on duration and participation will concentrate exclusively on strikes.

Table 5-1 shows the number of participants in strikes that occurred in Tula during our study period. While the sample size is small, it is, nevertheless, an accurate representation of labour unrest in Tula. An examination of data reveals that while the number of strikes was small, the number of participants was relatively large. The average number of striking workers was 266 in the years 1890-1900, while the median number of striking workers was 320. In the total sample, eighty per cent of the strikes involved more than 100 participants.
At first glance, this observation seems to be inconsistent with the earlier suggestion in the present chapter that the workers’ mood was more cautious and conservative whenever the Russian economy took a downward turn. Such a suggestion would have it that, as a consequence, the average number of participants and incidents would have decreased rather than increased.

This inconsistency can be explained in two ways. In the first place, as was noted in the Introduction, smaller factories generally suffered more than larger ones in times of economic crisis. The threat of shutdowns and lay-offs might have made their workers especially reluctant to strike, with the result that strikes occurred only at the larger enterprises. Secondly, even in the worst of times, there must have been some circumstances which could provoke a strike, and it seems reasonable to suppose that the “critical mass” of discontent necessary to produce a strike was greater at such times. In other words, if workers feared the loss of their jobs, it follows that a grievance would have to be enthusiastically and widely felt before collective action could occur. By the time that such action did occur, the number of workers affected likely would be greater. Conversely, a lower degree of consensus or preparation might have been sufficient to launch a strike in more prosperous years. Further support for this can be found in statistics on the duration of strikes. The average duration in Tula was three days and strikes occurred at a time of worsening economic conditions. Furthermore, defensive issues were prominent on each occasion.

Statistics on the duration of strikes also can be used to compare the Tula workers with their counterparts in other industrial centres. In Moscow from 1880 to 1894, eleven per cent of all strikes lasted three
days or longer. In 1895 to 1900, the figure was twenty-two per cent.\textsuperscript{92} In the years 1895 to 1900, where comparative data are available, fully nineteen per cent of all strikes in European Russia and Russian Poland lasted ten days or more, while in Moscow such cases were a mere 1.5 per cent, and in Tula there were no such incidents at all.\textsuperscript{93} In this respect, both Tula and Moscow seem to have lagged behind other industrial centres of the Russian empire, with their workers showing a surprisingly low level of militancy or perseverance.

\textsuperscript{92} Robert Eugene Johnson, \textit{Peasant and Proletarian}. p.141.
\textsuperscript{93} V.E. Varzar, \textit{Statisticheskie svedeniiia o stachkakh rabochikh} p.39. The author commented that the Russian strikes were generally of much shorter duration than those which were occurring at the same time in Western Europe and Britain.
Chapter 6

Class Consciousness
The previous chapter outlined the major incidents of labour unrest in Tula in the years 1880-1900. The present chapter will attempt to explain them by referring back to the questions, issues, and trends which were explored in Chapters Two to Five. Initially, the discussion will centre on patterns in different industries, with particular reference to the factors which distinguished one branch of industry from another. The discussion will then proceed to examine the role of outside agitators, using statistical evidence alongside more traditional sources. Finally, utilising this same evidence, the workers' "consciousness," and fundamental concerns which drove them to protest and to persevere in their struggles will be evaluated.

Industrial patterns

While the year to year distribution of labour unrest was essentially the same in each major branch of industry, in Tula the degree of labour unrest varied greatly from one industry to another. From our earlier discussion of strikes and economic cycles, we would expect that the fastest growing industries would show the highest rates of unrest, and in the main this prediction is borne out. Industries which were identified in Chapter Two as stagnant or in decline had exceptionally low rates of labour unrest. At the opposite end of the scale, among industries which were growing at a faster rate, we find a greater diversity in the patterns of labour unrest.

The classical Marxist-Leninist model of the Russian proletariat, as briefly outlined in the opening chapter to this study, would lead us to expect the highest incidence of unrest would occur in modern and mechanised industries, where large factories or plants and a better educated, more experienced work force could be found. Low skill
occupations, especially those which permitted workers to retain ties to the countryside, would be expected to show lower rates of unrest. The figures tend to support this model. The metal industry in Tula accounted for fifty per cent of all incidents of unrest and had the highest number of participants. However, it must be said that when strikes did occur in this industry, they were not especially long in comparison to other industries: the mean duration of strikes in the metal industry was 2.5 days and four days for other all other industries.

Table 6-1: Distribution of labour unrest by branch of industry 1890 to 1900

<table>
<thead>
<tr>
<th>Number of Incidents</th>
<th>Number of Participants in Strikes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Total</td>
</tr>
<tr>
<td>a. Cotton-spinning</td>
<td>1</td>
</tr>
<tr>
<td>b. Sugar-refining</td>
<td>1</td>
</tr>
<tr>
<td>c. Brick and cement</td>
<td>1</td>
</tr>
<tr>
<td>d. Metal and machine</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
</tr>
</tbody>
</table>

a. Source: Obzor Tulskoi Gubernii za 1900 god, Tula: 1901, Table 12.
b. Figure for 1890, Obzor Tulskoi Gubernii za 1890 god, Tula: 1891, Table 20.

Was the size of factories (Table 6-2) a major factor in the level of labour unrest? The largest factories in Tula were those involved in
the metal industry and it was this industry that showed a relatively high number of incidents. The utilisation of advanced technology and large-scale mechanised production also had been commonplace in this industry for many decades. In general, there seems to be a direct correlation between the actual size of factories and the various industries' rates of protest.
Table 6-2: Size of Tula Work Force by industry 1862-1900

<table>
<thead>
<tr>
<th>Type of Production</th>
<th>1862</th>
<th>1875</th>
<th>1877</th>
<th>1883</th>
<th>1887</th>
<th>1891</th>
<th>1893</th>
<th>1894</th>
<th>1897</th>
<th>1900</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Metal Industry</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Armaments factory</td>
<td>3600</td>
<td>3221</td>
<td>5441</td>
<td>3000</td>
<td>2200</td>
<td>3450</td>
<td>8094</td>
<td>10045</td>
<td>8142</td>
<td>6918</td>
</tr>
<tr>
<td>- Cartridge factory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(Opened in 1881)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>- Machinery construction</td>
<td>65</td>
<td>48</td>
<td>82</td>
<td>60</td>
<td>420</td>
<td>437</td>
<td>410</td>
<td>50</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>- Samovar, Locks and hardware, Accordion</td>
<td>1601</td>
<td>2728</td>
<td>2387</td>
<td>2327</td>
<td>2298</td>
<td>2569</td>
<td>3052</td>
<td>3681</td>
<td>3369</td>
<td>2813</td>
</tr>
<tr>
<td>construction</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Leather, bristle</td>
<td>618</td>
<td>597</td>
<td>535</td>
<td>748</td>
<td>359</td>
<td>385</td>
<td>170</td>
<td>196</td>
<td>110</td>
<td>180</td>
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<tr>
<td>II. Animal by-products</td>
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<tr>
<td>- Sugar refining</td>
<td>54</td>
<td>320</td>
<td>148</td>
<td>415</td>
<td>415</td>
<td>610</td>
<td>681</td>
<td>645</td>
<td>680</td>
<td>850</td>
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<tr>
<td>III. Vegetable by-products</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Iron-copper smelting factories</td>
<td>108</td>
<td>90</td>
<td>113</td>
<td>290</td>
<td>465</td>
<td>562</td>
<td>142</td>
<td>142</td>
<td>1053</td>
<td>676</td>
</tr>
<tr>
<td>Sub-total</td>
<td>5981</td>
<td>7021</td>
<td>8672</td>
<td>7642</td>
<td>6567</td>
<td>10636</td>
<td>17567</td>
<td>20349</td>
<td>17046</td>
<td>12905</td>
</tr>
<tr>
<td>Total (includes remaining industries)</td>
<td>6422</td>
<td>7339</td>
<td>9054</td>
<td>7818</td>
<td>7156</td>
<td>10772</td>
<td>19300</td>
<td>21750</td>
<td>18444</td>
<td>15969</td>
</tr>
</tbody>
</table>

Sources: Perechnia fabrik i zavodov Rossii, 1895 g., St. Petersburg: 1897; Obzor Tulskoi Gubernii 1880-1900 goda, Tula: 1881-1901; and A.A. Petukhov, "K voprosu o formirovanii i strukture Tulskogo proletariata vo vtoroi polovine XIX v," in Iz Istorii Tuly i Tulskogo kraia, Tula: 1983, Table 1, p. 46.
Hiring patterns are another factor which might have influenced the course of labour protest. As was noted in Chapter Four, female and child labour was concentrated in certain branches of textile production, especially cotton-spinning. Employers in these industries were reported to prefer women and children as workers because they could pay them lower wages, and because they regarded them as more docile. This reputation would seem to be contradicted by the figures in Table 6-1 which, while showing a low incidence of unrest in textile mills, indicate a much higher rate of participation than in the metal industry. One possible explanation for this phenomenon is the fact that families often worked together.

The figures in Table 6-3 make it clear that labour unrest was widespread in the provinces surrounding Tula. As we would expect, the larger Moscow province with its higher concentration of industry, bigger factories, greater diversity of industry and larger worker population experienced a higher incidence of labour unrest. Beyond this, there appears to be no discernible pattern amongst the provinces in the region: factors such as type of industry, location, proximity to urban centres, scale, and whether the industrial centre was recent or well-established, bear little correlation to rates of labour unrest. Each province had its own eclectic tendencies.

Table 6-3: Number of strikes and striking workers for Tula and surrounding provinces 1895-1904

<table>
<thead>
<tr>
<th>Year</th>
<th>1895</th>
<th>1896</th>
<th>1897</th>
<th>1898</th>
<th>1899</th>
<th>1900</th>
<th>1901</th>
<th>1902</th>
<th>1903</th>
<th>1904</th>
<th>Total</th>
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<tbody>
<tr>
<td>Tula</td>
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<tr>
<td>Moscow</td>
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<td>47242</td>
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<td>Kaluga</td>
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<td>36</td>
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<tr>
<td>Orel</td>
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</tbody>
</table>

^a Data from the Tsarist government's statistical reports.
It can be said, then, that regional and industrial differences can illuminate some details of the labour movement as it developed in Tula in the years 1880-1900, but such differences raise almost as many questions as they answer. It is possible that other province-wide factors were at work. If not, then perhaps the labour movement grew out of unpredictable local causes.

The role of outside agitators

If in the first instance strikes arose at factories at which the workers were in more difficult economic conditions, the further diffusing of this movement and of discipline among the strikers depended for the most part on the activity of secret revolutionary associations.¹

Ministry of Internal Affairs,
Secret Circular, 12 August 1897.

As has been alluded to in the previous chapter, the years 1880-1900 saw the first attempts at systematic revolutionary propaganda among Tula workers. These efforts were undertaken by a series of short-lived conspiratorial groups, whose ideology ranged from radical populism in the late 1870s to several flavours of Marxism in the latter

¹ I. Kh. Ozerov, Politika po rabochemu voprosu, Moscow: 1906, p.29.
part of the 1890s. Firstly, a summary of their activities will be presented and then an attempt will be made to determine whether these groups, in fact, exercised the sort of influence attributed to them by the Ministry of Internal Affairs in the above quotation.

Revolutionary propaganda among workers in Tula can be traced to activities by members of narodovoltsy in the late 1870s, whose propaganda activities centred on the key institution of the workers' circle, or kruzhok. The basic outlines of circle organisation took shape in the 1870s and varied little throughout the 1880s and 1890s. Circles were typically made up of three to six workers, meeting in the apartment of one member or in a special "conspiratorial" apartment set up for this purpose by the propagandists. Workers and their student propagandists knew each other only by first names or by conspiratorial nicknames. Tula narodovoltsy often divided workers into circles at three different levels, according to educational level and degree of political consciousness.²

Circle meetings commonly included the reading of "tendentious" or illegal literature, and visiting activists from the intelligentsia explained the activities and goals of the revolutionary movements elsewhere. Circle business was discussed, especially the task of attracting new members and how to use money from the kassa. All the circles had kassy, with dues often equalling four to five per cent of weekly wages. The money was intended for books and aid to prisoners and exiled workers, but apparently went for mutual aid.³

A variety of literature was used for propaganda among workers

² V.N. Ashurkov, "1-ia podpolaia tipografiia v Tule. (K istorii Tulsikh revoliutsionnykh kruzhkov 80-kh g.g.)," in Tulskii Kraevedcheskii Sbornik Tula: 1930, p.22.
³ V.N. Ashurkov, "1-ia podpolaia tipografiia v Tule. (K istorii Tulsikh revoliutsionnykh kruzhkov 80-kh g.g.)," p.23.
in the mid-1880s. Perhaps the most frequently mentioned are three brochures explaining principles of political economy in simple terms to workers: Khitria mekhanika, a pamphlet of the mid-1870s; Tsar-Golod, composed by the narodovolets A.N. Bakh in 1883; and Kto chem zhivet?, a translation of the brochure by the Polish Social Democrat Szymon Diksztajn. Works of fiction were very popular with workers, including stories by Naumov, Zlatovratskii, Gleb Uspenskii, and other Russian authors with populist sympathies. Also popular were foreign novels in Russian translation such as Emma by the Lassallean Jean-Baptiste Schweitzer, The Tale of a Peasant by the Frenchmen Erckmann and Chatrian, and Spartacus by the Italian Raffaello Giovagnoli. Propagandists distributed copies of the newspapers for workers Rabochaia Gazeta and Zerno, published by Naraodnaia Volia and Chernyi Peredel in 1880-1881, as well as Rabochii, the newspaper of the Social Democratic Blagoev group (1885). Several populist propaganda works of the 1870s retained their popularity, including The Tale of Four Brothers, Of Truth and Falsehood, and The Sated and the Hungry. Workers also read the "tendentious" articles in the "thick" journals of the 1870s and 1880s (Notes of the Fatherland and others), as well as hectographed copies of the brochures of the German Social Democrats Wilhelm Liebknecht and Ferdinand Lassalle.

Discussion topics in workers' circles often centred around common readings. More difficult concepts, including the ideas of Chernyshevskii, Marx, and Lassalle, were presented in lectures by the

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4 The first Social Democratic group within Russia was organised by Dmitrii Blagoev, a student at St. Petersburg University. The Party of the Russian Social Democrats, founded by Blagoev, was active in propaganda among students and workers from late 1883 to early 1887.

5 V.N. Ashurkov, "1-ia podpolnaia tipografiia v Tule. (K istorii Tulskikh revoliutcionnykh kruzhkov 80-kh g.g.)," pp.23-24.
propagandists. Standard topics for circle discussions included principles of political economy, the situation of workers and peasants in Russia and abroad, class relations and state structure.

The basic vehicle of propaganda activity in the 1880s was the workers' circle and this was true of both narodovoltsy and Social Democrats. Propaganda was aimed primarily at a small stratum of advanced workers. These, it was hoped, would act as intermediaries in the transmission of revolutionary and socialist ideas to the mass of less-educated workers, and ultimately to the peasantry. Given the level of development of the workers' movement and the government's persecution of all those involved in its organisation, this seemed all that was possible.

Members of the "Moskvichei" group I. Zlobin, O. Liubatovich, and the brothers Edukovy centred their propaganda activities on Tula workers, whilst the brothers Kviatkovskie focussed their attention on the peasantry in the rural village of Khotush (Tula uezd). Close association with the Tula narodovoltsy was the well-known activist Praskovia Ivanovskaia, and her brothers. Other influential narodovoltsy prominent in Tula after the assassination of Alexander II in 1881 were Cheslav Pettrashkevich, Ivan Gusev, and Viktor Novitsk, who established three illegal revolutionary circles amongst railroad workers, medical students and members of the intelligentsia.

The narodovoltsy continued their propaganda activities despite police persecution, arrests, searches, provocation and exile. New worker circles were established in 1884 among the Tula cartridge workers, and prominent members included I.E. Edukov and N.I. Voropaev. In

7 Revoliutsionnoe byloe, no. 2, 1923, pp.6-7; and Put Borby i Pobed. p.10.
August of 1886, a *narodovoltsy* illegal printing press was set up in Tula, part of a network of groups formed in St. Petersburg, Moscow, Kharkov and other provincial cities. It was seized by the police in the following year. Towards the end of the 1880s, a terrorist offshoot of the *narodovoltsy* appeared in Tula. Amongst its members were O. Petrashkevich, G.I. Prokofev and S.A. Basov.

The process of political education carried on in workers' circles of this period fostered the gradual creation of a "workers' intelligentsia" - politically conscious workers who were able to take active roles in propaganda and organising activity. However, their revolutionary activities left few visible traces among Tula's factory workers. Because of their clandestine activities and conspiratorial tactics, these groups remain shrouded in secrecy and there is no available evidence to link them to any specific manifestations of worker unrest in Tula in the 1880s or later.

In the late 1880s and early 1890s, new organisations began to form, first in St. Petersburg and then in Moscow. The most successful of these were the St. Petersburg circles or *kruzhki* led by Tochisskii and Brusnev, which organised study and discussion groups, distributed literature, and attempted to popularise Marxist ideas among factory workers. In the autumn of 1891, Brusnev, an engineer, completed his studies in St. Petersburg and moved to

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8 *Revolutsionnoe byloe*, no. 2, 1923, pp.6-7; TsGAOR, fond 102, opis 252, 1887 g., pp.37, 42, 43, 52; and *Put Borby i Pobed*. pp.11-12.
10 The activities of these groups in St. Petersburg are the subject of an outstanding monograph by R.A. Kazakevich, *Sotsial-demokraticheskie organizatsii kontsa 80-kh nachala 90-kh godov* Leningrad: 1960.
Moscow, where he joined two worker members of the circle in an effort to build a new underground organisation. From the outset, the new Moscow circle was divided into factions: one group, led by the forestry student Mikhail Egupov, was closer to the terrorist traditions of *Narodnaia volia*, while another, which included Brusnev and several others considered itself comprised of orthodox Marxists. Nonetheless, all factions managed to cooperate in efforts to establish a base in the working class, not just in Moscow but in Tula and other cities as well. The number of worker *kruzhki* was not large, but the leaders were enthusiastic about the progress of their efforts. With the assistance of Boris Groman and V.V. Avaliani, Egupov was able to make contact with workers' circles in Tula.\(^\text{11}\) According to a December 1891 secret police report, two circles were active among Tula workers at this time, the most influential of which was "terrorist" in nature and "had a completely satisfactory library."\(^\text{12}\) The second, so-called democratic circle had just been formed and therefore asked the Moscow intelligentsia (Avaliani) to "send them books and a leader."\(^\text{13}\) Avaliani told the circle to contact Egupov, who, after learning of the workers' decision to set up an artel workshop, decided to begin extensive propaganda among them.

Arriving in Tula in late October 1891, Egupov held a series of discussions with the workers' leaders, the former St. Petersburg activists Medofiev and Rudelev. Although the members of the Tula group were anxious to receive substantial financial help from Egupov, they wanted first to find out about his views on terror.


\(^{12}\) One can infer that by "satisfactory" the police meant a well stocked library which contained propaganda material that was utilised in worker circles.

According to information contained in a police report, Egupov responded that "in my view, there are still not the forces for it, which would decide the question in a practical sense. And in theory, it [is] impossible to decide definitively [for terror]." Rudelev agreed with Egupov and added that the most important task at that moment was "propaganda among workers."¹⁴

Egupov worked with the Tula circle throughout the autumn of 1891, bringing funds raised by Vanovskii and literature from Moscow. In late November, on his second visit to Tula, Rudelev and Mefodiev again gave him "something in the order of an examination" and then revealed their connection with the Petersburg Workers' Union. Mefodiev took the lead in their conversations, convincing his comrades to give up the idea of forming an artel workshop, and arguing that they should instead devote their energies to worker organisation. "Only an organisation of circles can be of use," Mefodiev said, citing Petr Alekseev's widely read 1877 trial speech: "only workers can accomplish the political revolution in Russia." Egupov was undoubtedly correct in concluding that "Mofodiev was a fanatic about workers' organisation and propaganda." As Egupov departed Tula, Rudelev told him that the workers "counted on" him, because assistance from the intelligentsia, even from St. Petersburg, was not forthcoming. In return, Rudelev promised that he would come to Moscow to acquaint Egupov with local workers.¹⁵

A wave of arrests of the leading figures in May 1893 brought a temporary hiatus to revolutionary activity in Tula.¹⁶ The history of the revolutionary underground until the end of the century and

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¹⁶ GATO, fond 3097, opis 3 delo 2,kor 19, contains fourteen portrait photographs of the principle members of a Tula Marxist circle with brief biographical histories.
beyond was to follow this familiar pattern: each wave of arrests would be followed by a period of calm, during which the Marxist organisation was reconstituted under new leadership. Slowly, the new leaders would re-establish ties to a few factories, re-form *kruzhki*, and begin to issue handbills, leaflets, and proclamations. Inevitably, these actions would attract the attention of the authorities and new arrests would follow. Social Democratic circles in Tula were primarily centred in the armaments works, cartridge factory, samovar factory, and amongst railway workers. Leading figures of these Marxist circles were I.I. Savelev, I.I. Skvortsov-Stepanov, S.I. Stepanov, and A.P. Skliarenko. These circles were closely aligned with other Marxist groups active in major industrial centres (notably St. Petersburg and Moscow), and of these, the Workers' Union in Moscow is perhaps the most prominent. In early 1897, two activists from the Workers' Union sent to Tula came under police surveillance, N.M. Velichkin, hereditary honorary citizen (*grazhdanin*) and a student of Moscow University, and M.P. Boikov, also a *grazhdanin*. Moscow provided Tula circles with revolutionary literature as well as personnel. But the arrests continued. In August 1897, Boikov and Velichkin were arrested along with prominent worker members I.N. Nazarov (*imeshchanin* from Tula), the brothers Samokhin (peasants from Tula), and the brothers Samokhin (peasants from Tula).

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18 TsGAOR, fond 124, opis 6, delo 28, pp.27-28; and Revoliutsionnoe byloe, no. 2, 1923, pp.11-12.
province), N.V. Kozlov (a peasant from Kaluga), M.P. Eremeev
(meshchanin from Bogoroditsk uezd, Tula province), N.G. Kirillov
(meshchanin), P.S. Malinin (a peasant), M.A. Teikhman (meshchanin
from Tula), P.F. Afanasev (meshchanin from Krapivna uezd, Tula
province), S.M. Iakudobskii (a peasant), and S.N. Bokov (a peasant
from Smolensk) and the circle was subsequently disbanded. But
the cycle continued: new circles were formed, outside agitators
arrived, numerous leaflets were issued, secret meetings were held,
and organisational programs were discussed, until the next wave of
arrests.

How successful were these various groups in making contact
with workers and fermenting unrest in the factories of Tula? This
question can be answered both by using statistics on the strike
movement and non-statistical sources. Firstly, non-statistical sources
support the assertion that Marxist revolutionary groups concentrated
their attention upon one sector of industry - the metal trades - to the
virtual exclusion of all others. It is understandable that the
revolutionary groups should have paid more attention to this
element, which was generally regarded as more seasoned, city-bound,
and sophisticated than the half-peasant workers in other industries. It
was often argued that peasant workers were not fully workers, that
their real ties were to the land, and that they had no real commitment
to factory work. Thus, in the story Dreamers by N. Zlatovratskii, a
populist writer, the peasant worker Dema still had not come to

19 TsGAOR, fond 102, opis 194, delo 261, pp.25-27.
20 Revoliutsionnoe byloe, no. 2, 1923, p.12.
21 For example, A.P. Skliarenko arrived in the spring of 1898 and later the same year
was instrumental in uniting up to ten Social Democratic circles in Tula. He earlier was
responsible along with V.I. Lenin and I.Kh. Lalaiants in founding the first Marxist
Moscow: 1922, pp.14, 25, 38, 39.
consider himself an industrial worker after ten years in the factory. He still dreamed of the countryside:

Before him in the hazy distance, as a longed-for haven, the countryside constantly came to him: instead of the sooty and gray walls of the workshop, in the din and noise of the machines and instruments, he heard the trills of the lark, the squeak of carts with hay and sheafs, the dialect of rural streets. He saw his hut, his cow, horse, broad fields, the clean turquoise sky, the green forest and... space, boundless space.  

It was widely felt that such workers would not struggle for general worker goals, that they were interested only in accumulating money for a future return to the countryside. Numerous government officials also held this view, assuring themselves that the peasant character of the majority of workers would save Russia from the calamity of a labour question as that which had been experienced by Europe.

In relation to peasant workers, scholars have differed in their assessment of the formers' degree of permanent commitment to factory work, the intensity of their awareness of themselves as industrial workers, and the implications of their continued links to the village, including family ties and the possession plots of land.  

L.M. Ivanov has argued that by the turn of the century, a large sector of the industrial labour force had de facto severed any significant connection with agriculture. In this respect, he considers a worker's legal classification as a peasant as misleading, because a change in legal status was often difficult and unnecessary. Similarly, he questions the significance of land-ownership, as holdings were

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frequently worked by hired labourers or leased out while the owner continued to work in industry. Even periodic visits to the village were not a sign of enduring ties to agriculture or the rural community—such visits were often only for vacation or rest. Nevertheless, Ivanov also recognises the great diversity in the degree of peasant worker commitment to industry. For example, workers maintained closer links to the village in less mechanised industries and in those factories farther removed from important industrial centres. Other scholars, such as Robert Johnson in his study of Moscow workers, have argued that the peasant workers' ties to the village were still quite strong and that most workers were firmly attached to both factory and village.

Whatever the subtleties, there is no doubt that the distinction between full proletarian and peasant worker was an important one for the workers themselves. In Kanatchikov's factory in Moscow, the peasant workers were called "grey devils" and ridiculed whenever the opportunity presented itself. Kleinbort quotes numerous expressions and sayings used to deride rural workers. They were scorned for their country ways, their humility before the bosses, their immoderate drinking, and their visits to prostitutes. They were also regarded as unreliable in times of strikes (that is, unwilling to stay out and liable to strikebreak) and hopelessly impervious to socialist teachings. Other factors also provided a strong basis for

differentiation and stratification among workers: occupation, age in terms of the number of years worked, religion, nationality, region, and ethnicity could each serve as the basis for social divisions within the working class. Given the workers' isolation and fragile sense of personal identity, it is not surprising that all such differences became bases of differentiation. Another important factor in worker differentiation was the absence of strong craft worker traditions. This was because craft guilds had never really developed deep roots in Russia. Thus, there was no category of workers with a sense of independence and identity stemming from a preindustrial past. Furthermore, there was no real worker aristocracy of a kind which developed in England, for a basic precondition for the emergence of such a privileged group was strong and exclusive trade union organisation.

In addition to the above, it must be said that Russian workers were united by a powerful common trait: they were all excluded from any real participation in society. This was particularly true of the mass workers, even more so than their counterparts in England, France, or Germany, and it was this exclusion that made them such an appropriate base for a revolutionary movement centred on class.

Nonetheless, statistical sources indicate that, in spite of the agitational and propagandist efforts of the revolutionaries, the number of participants in strikes as a percentage of the total workforce in the textile industry was 84.2 per cent (if we include all other industries the figure was 23.1 per cent), while the metal industry's

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comparable figure was 7.4 per cent. These figures are starkly contrasted by the total percentage of strikes overall by branch of industry, where we find that fifty per cent of the total number of strikes occurred in the metal industry. In other words, the revolutionary groups' involvement with metalworkers does seem to have increased those workers' propensity to strike. Moreover, these strikes were "economic" in origin as opposed to "revolutionary", the latter involving incidents initiated by the revolutionary groups themselves. Furthermore, while the number of strikes in the other industries combined only matched those of the metal industry, the former had a much higher percentage of participants, indicating a higher level of "consciousness."

Becoming a "conscious worker" - and this was a term in wide use at the time, together with the term "worker intelligentsia" - was a subjective experience. It sometimes, though not always, involved political commitments. Usually, conscious workers adopted outward signs of their convictions, and the role even became quite institutionalised. These objective dimensions do not define the role, however, although for sociological purposes they may be more significant than the subjective experience because they are easier to quantify. The conscious worker was as elusive a social type as the intelligentsia and for the same reason: both concepts refer to a basic stance toward the world which is difficult to identify through external action. The essentially subjective reference of the concept does not preclude the possibility of analysing the conscious worker as a social type. For despite undoubtedly great subjective variations, there was

29 Some authors, such as Gvozdev, distinguish between the two. S. Gvozdev, Zapiski Fabrichnogo Inspektora. Iz Nabliudenii i Praktiki v Period 1894-1908 gg. Moscow-Leningrad: 1925.
enough of a standardised role to allow sociological investigation.

If, in its conventional usage, the term *conscious* is subjective (although not exclusively so), this does not mean that it is evaluative. Social Democrats liked to think that only they were conscious, that is, that they only truly understood the world around them. All other workers were unenlightened and cloaked in ignorance, whatever their perceptions might have been of themselves. The present usage is not evaluative in this sense: I assume that there is no true understanding of the world by which "consciousness" can be objectively evaluated. A conscious worker could be an anarchist, a Tolstoyan, or a monarchist - although most would have identified themselves as socialists of one type or another.

Consciousness was also not a permanent state. Conscious workers could lose faith and shift loyalties as could mass workers. The former could once again become mass workers, with no particular commitments and no trust in the future, and the social world could once again become mysterious and unpredictable to them. This does not mean that they would somehow become less intelligent as a result. Again, no evaluation is implied, in as much as it was inherent in the usage of the period. Hindsight forces us to be a little more skeptical.

The phenomenon of the conscious worker was not restricted to Russia. In Spain, the same terminology was used ("obrero consciente"), and there is much similarity between the two roles as well.30 Probably the same correlation exists in other languages and cultures, for the phenomenon of "consciousness" was inherent in the historicism (in Karl Popper's sense) of nineteenth century labour

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movements. It was also inherent in the process that Karl Mannheim called "general democratisation": acceptance of the legitimacy of the lower classes' views as identifiable and respectable alternatives.

Once again, however, Russia was distinctive. Conscious workers were part of all labour movements, yet Russia's labour movement and the political conditions in which it developed bore little similarity to the English, French, or German patterns. To be a labour militant in Russia was to take risks seldom incurred in Western Europe. It was also to isolate oneself from one's fellow workers to a much greater degree. Thus, the Russian conscious workers developed to an extreme extent the traits found elsewhere in a less pronounced way. They had a great sense of separation, of distinctiveness, which was generally linked to an air of superiority toward other workers. They regarded themselves as part of a knowing elite, one of the few who had been able to see behind appearances. This sense of separation was reinforced by the need for secrecy, which also had its psychological appeal. Membership in this elite involved a code of behaviour and a symbolism, and the protection and cultivation of this new identity became so central to the workers' sense of themselves that they were willing to go to great lengths to preserve it. Underground work, jail, and exile became badges of honour, confirming the commitment of the conscious workers to their role.

Russia was different from Western Europe in another way as well. If, during the late nineteenth century, the lower classes in Europe were gradually acquiring their own voice in public life and Mannheim's general democratisation was well underway, in Russia this process had only just begun. Workers still had little access to education, and they had few opportunities to develop cultural
expressions appropriate to their own experience. To take a key example: there was no mass worker press, and the underground newspapers that did manage to survive for a time were almost always controlled by the intelligentsia. Thus, to a much greater degree than in Europe, conscious workers depended upon the intelligentsia to define their identity. Lacking the means to create their own subculture, including a range of political alternatives based on their own experience, they turned to the intelligentsia, specialists in ideology. In practice, they even delegated to the intelligentsia the right to define who qualified as being conscious. Those workers who emphasised the economic struggle were labelled as unenlightened and backward; those who accepted the intelligentsia's ideology were conscious, leading workers, the vanguard of the proletariat. For these reasons, the Russian conscious workers tended to be much more ideological than their European counterparts. Also, their relationships to the intelligentsia, with its high degree of dependence, were both profound and more ambivalent.

In some way, tsarist repression and the dominance of the intelligentsia virtually precluded the emergence of authoritative leaders from among the workers. Impressive figures there certainly were, but none who could achieve national prominence as spokesperson for their class.

Returning to our analysis of outside agitators, we note that the revolutionary groups' activities were confined almost exclusively to the city of Tula. The reasons for this were obvious: communication and conspiracy were much simpler and more effective in a large city than in a country village, where any outsider was conspicuous. Nonetheless, the implication of this arrangement is that events in the outlying uezdy were much less likely to be directly influenced by the
revolutionary organisations. It was noted above that the number of striking workers as a percentage of the total workforce in the textile industry (which was located in outlying uezdy), was appreciably higher than that of the metal industry.

An examination of the specific instances where the underground groups made contact with particular factories and plants discloses no cases of direct influence over strikes or other protests. The tactic of agitation, as practised after 1894, involved gathering lists of workers' grievances and setting these forth in easy-to-read leaflets. In most cases, however, the revolutionary activists seem to have learned of these grievances only after protests had begun. In one instance in 1898 at the Batashev samovar works in Tula, leaflets under the auspices of the Tula group RSDLP appeared after the strike had ended. Nor did workers automatically follow the call to strike when it was advocated by Marxist leaders as was the case in July 1897 at an illegal meeting of workers held on the outskirts of Tula.

Earlier in the present study (Table 5-1) it was noted the predominant issues of protest centred around "economic" grievances, namely wages. Indeed, wages accounted for 83.3 per cent of all grievances and demands expressed in this sample. Issues that encompassed "revolutionary" action are conspicuously absent. Issues that were of particular concern to revolutionary circles such as solidarity (that is, 

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31 Put Borby i Pobed. p.22.
32 TsGAOR, fond 124, opis 6, delo 28, pp.6-7, 31; and Put Borby i Pobed. p.18.
33 Both the imperial police and Soviet historians correctly identify economic rather than political factors as the primary cause of the strikes in the 1880s in Russia. See Istoriia rabochego klassa Rossii, 1861 - 1900 gg., ed. L.M. Ivanov Moscow: 1972, pp.190-191. For government assessments and statistics, see the Report of the Moscow Factory Inspector (lanzhul) on strikes from 28 November 1885 to 1 January 1888, in TsGIA SSSR, fond 20, opis 13, delo 3, pp.238-248. Of the 331 workers' complaints received by Moscow Factory Inspector lanzhul between November 1886 and January 1888, 153 were judged to be justified. The three most frequent categories of complaints dealt with such economic problems as being released before the end of a contract and not receiving full pay.
solidarity with other striking workers, solidarity with the 
downtrodden workers of other provinces, and solidarity with the 
international working class and its revolutionary struggle), were not 
raised. Marxist revolutionaries attempted to raise general political 
demands in their literature, but here too there seems to have been no 
response from Tula workers in the 1890s. The issue of political 
reforms or civil rights was never mentioned except in the literature of 
Tula revolutionary circles.34

In general, we must conclude that the Marxist revolutionary 
circles, like their populist forbears, had little direct, visible influence 
on the course of labour unrest in Tula between 1880 and 1900. Yet it is 
worth bearing in mind that the seeds which the Tula revolutionaries 
planted in the mid-1890s might have borne fruit some years later.

Evidence of workers' outlook

The discussion of strikes and protests has illuminated the 
workers' outlook from a number of angles. In the preceding chapter it 
was found that the incidence of labour unrest moved in accordance 
with changing economic conditions, and that incidents were common 
in times of prosperity and job security. In the present chapter, it has 
been apparent that some rather ambiguous evidence exists concerning 
the patterns of unrest at large and small, modern and traditional, and 
urban and rural enterprises. It has also been suggested that the 
influence of outside agitators on factory workers' protests was at best 
indirect, and that a fair proportion of incidents occurred in industries 
and regions which were untouched by such influence. The remaining

task now is to re-examine the records of strikes and other protests, looking for further clues to the workers' state of mind.

One of the most important questions to be answered is whether workers in any one factory were aware of events elsewhere. Should separate incidents or protests be regarded as distinct and isolated events, or were demands, slogans, or tactics communicated from factory to factory? Previous studies of labour unrest in the 1880s and 1890s have barely touched on this question. V.E. Varzar's statistical compilation of information on strikes in all of Russia (1895-1904) concluded that sixty per cent of all strikes were "collective," that is, involved more than one enterprise. Varzar did not, however, indicate what criterion he had used to identify these collective outbreaks other than their concurrence. In 1895, the governor of Vladimir reported to Minister of Interior Durnovo that "it is impossible to deny that there exist very consistent relations among factories, and the workers of one factory know very well what occurs in another. Therefore, any form of disorder not punished with the necessary strictness must be considered an extremely infectious phenomenon." The single best-known example of united action among workers at separate enterprises occurred in May-June 1896 in St. Petersburg, when twenty-two textile factories took strike action simultaneously. Coordination clearly existed, as strikers from different parts of the city came together in mass meetings and for two weeks maintained a common front against employers and police.

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In Tula, there was no such collective manifestation during the years of the present study. Ideas, information, and tactics could have nevertheless spread through a number of channels. The most obvious was the revolutionary underground, which repeatedly tried to point out the need for solidarity by showing the successes of workers elsewhere in Russia. Another channel of communication was provided by itinerant workers. Police officials blamed this "unstable element" for spreading rumours and sowing discontent, but such workers were also in a position to speak authoritatively about the conditions and protests which they had experienced elsewhere.

Yet another channel of communication was informal fraternisation among workers from different enterprises. Obviously this was more likely to occur in large urban and industrial centres where workers from separate enterprises encountered each other outside working hours. Police reports often mentioned workers gathering in taverns, on street corners, or in wooded sections on the outskirts to Tula. On such occasions they could discuss common problems, air their grievances, or even plan collective actions. Outside the cities, socialisation among workers from different factories might have occurred on major holidays and feast days, when peasant-workers returned to their native village and had an opportunity to compare notes on their experiences. This seems logical given that much of the social life of such workers was centred around zemliaki, and in some cases, rumours might have spread through factories by a grapevine whose roots lay in the countryside.

Given the paucity of available source materials, any attempt to

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read the workers' mood on, for example, the issue of solidarity, from accounts of strikes is bound to be impressionistic. The record of these events is incomplete and contradictory. It would be improper, however, to conclude from this that the workers were incapable of united action. Police and other government officials sometimes commented on the tight discipline which workers maintained during strikes, and on the avoidance of actions which might lead to violence. In other incidents, workers showed that they were aware of the fine points of the Factory Law, insisting, for example, that the employer follow the correct schedule of wage payments, or complaining to factory inspectors about those specific issues which fell within the inspectors' jurisdiction.

This is not to say that violence or buntarstvo did not occur, or that workers never crossed strike lines or that they betrayed other workers to the police. Indeed the traditional mode of action of the mass workers was the "bunt" or spontaneous act of violence.

40 In dealing with worker memoirs, we should bear in mind that the majority of accounts were written many years after the events they describe, and that they relied largely on memories which might have varied widely at times from the facts. We must also be aware that, given the time lapse between event and account, the recollections of events presented in worker memoirs do reflect the original emotions and the conflict of ideas that characterised the workers' lives. Only on this basis can historians evaluate for themselves the testimonies presented. For Tula workers' accounts of factory life refer to Tulskaia Soiuza Metallistov. Ocherki i Vospominanii Tula: 1967; A. Frolov, Probuzhdenie. Vospominanii Tulskaia Rabochego Tula: 1925 and Ocherki Fabrichnoi Zhizni 60-kh i 70-kh godov Moscow: 1930.

41 During the course of a strike at a sugar refining factory in Tula gubernii in September 1896, factory inspector Metelskii commented, that the strike was peaceful in character and not expected to spread further in Tula. TsGAOR fond 102, opis 53, delo 15, ch.38, 1896, p.1.

Unplanned and with little strategy or leadership, bunts were immediate responses to particular provocation - a delay in the payment of wages, a lowering of wage rates, or some insult or coarse behaviour by the factory administration or the police. If any other motive was behind the bunt, it was the desire for revenge for all the accumulated grievances that workers had experienced and had no way of redressing.

Bunts were very common in Russian labour history and far from absent in Europe as well. Perrot writes that French strikes over labour discipline in the 1870s often bypassed economic rationality based upon calculation. They were frequently devoid of broader purpose, representing "the eruption of an anger usually controlled," and their purpose was revenge. They were savage and brutal, at times taking lives. Such eruptions of violence in France, however, even before the rise of large-scale worker organisations, were small in number. In Russia, the balance seems to have been in the other direction. There are numerous accounts of bunts in the multivolume collection of documents on the nineteenth century Russian labour movement and also in the memoir literature. Like peas in a pod, bunts were much alike. There was generally much random violence, the workers arming themselves with rocks, metal pipes, tools, or anything at hand. The rioting workers often broke windows, burned buildings, and beat up guards and factory administrators. Robbery and stormings of local stores were common. Sometimes the violence would reach extremes, particularly when the vodka flowed freely. In one St. Petersburg bunt of 1890, for example, the workers almost drowned one engineer in a canal, and they got as far as constructing a

gallows for the factory director.44

Bunts were, not surprisingly, the despair of the Social Democrats, those rationalists who believed in strategy geared toward history. And they were right that the bunt left few permanent traces. Bunts were usually ineffective. They did not accomplish much change in workers' political consciousness, and they alienated public opinion as well. They could be repeated endlessly without making any real change in the social or political life of the country.

Two qualifications are in order here, however. Firstly, the bunt could lead to certain changes in the workers' consciousness, even if these seldom led to real political reorientations. The first breach of the rigid structure of authority of Tsarist Russia was often intoxicating and the workers could feel like heroes, if only for a short time. When asked to identify some accused workers at their trial in 1900, an old woman responded: "Ah, batiushka! How could I recognise them? When this happened they were all giants, and now they sit there so small."45 Similarly, in making plans to beat up a foreman, Kanatchikov and his fellows "felt ourselves to be heroes, having done a heroic deed in the interests of all the oppressed skilled workers."46 After successfully resisting his boss after some fighting with a foreman, Ivanov remarked that "for the first time in our lives we felt that even we have human dignity."47 Defiance could increase worker solidarity, binding them together in adversity (and perhaps in guilt, if we are to believe Freud). In this vein Ivanov further wrote that "it

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seemed that some invisible threads united these twenty or thirty men into some single powerful body, and involuntarily for the first time in their lives they felt the power of labour before the strength of capital, and something new blew into their souls.” The very strong sense of loyalty to the collective among workers, which in normal times discouraged nonconformity and dissent, could become a powerful source of solidarity protest. Maybe their actions only took the form of simple retorts to the foreman's insults or demands for polite treatment but such changes were highly significant in the Russian context, where subordination depended upon fear. A greater sense of personal dignity was truly subversive. For these reasons the bunt was politically dangerous, and the tsarist authorities knew it.

The second qualification is that the bunt could easily turn into a strike. This progression is easily explained. There were often conscious workers who acquired influence and prestige after the bunt had begun and so could infuse it with some degree of organisation and direction. Perhaps the prototype of this kind of transformation was the famous Morozov strike of 1885, often regarded as the first real strike in Russian labour history. It began as a typical bunt, but under the leadership of a few experienced worker revolutionaries, it turned into a fully-fledged strike with a list of formal demands. Thus, in autocratic and capitalistic Russia, just as mass consciousness became intertwined with class consciousness, so mass action in the form of bunts could not remain separate from class action in the form of strikes. Indeed, mass action often provided the impetus for extensive class mobilisation.

Until the turn of the century in Russia, the organisation of

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48 Boris Ivanov, Zapiski Proshlogo. p.48.
protest remained rudimentary in the great majority of cases. There were certainly no permanent worker organisations, conscious workers at this time were a very isolated minority as compared to later periods, and contacts with the populist or Marxist revolutionary intelligentsia were sporadic. What the evidence presented in this chapter suggests, however, is that in the midst of the industrial turmoil of the 1890s, workers showed themselves capable of a certain measure of organisation and self-determination. Some of this was the result of outside influences, but also some of it seems to have arisen spontaneously, and can be attributed to the historical and evolutionary factors which have been discussed throughout the present study. If the Tula workers were indeed half-proletarian and half-peasant, then both halves contributed to their unity and organisation.
CONCLUSION
This study has brought the methods and orientations of socio-historical research to an examination of the workers of Tula. This work is a social history which focusses on workers. As such, it has elements of labour history, urban history, and family history. The exciting dynamism of social history stems from this panoramic quality. The social historian seeks to isolate the core experiences of identifiable groups within society because these core experiences tell us in the most fundamental sense, what life was like for our subjects. The social historian finds significance in the amorphous and evolving qualities of society, and presents a dynamic, integrated sense of social groups which intellectual, political and economic history cannot provide. In this sense, history takes on a different chronological framework. The significance is "from below" and thus, the regions of rulers, legislation and wars take on significance not for themselves, but for the way they accurately reflect the sense of periodisation felt below.

This study has approached the intense period of Russian industrialisation "from below," that is, through a study of Tula workers. This study is not methodologically innovative as a social history, but it is an innovative approach to Russian history. In Chapter One we discussed the limitations of the historiography of the Russian working class. This study has dealt with these insufficiencies. Its value and contribution lie in this: the application of social historical methodology to the unexamined lifestyle of the Russian worker - a lifestyle assumed but never fully investigated, and essential as a starting point in any inquiry into the Russian revolution. In the larger European context its significance is crucial as an alternative example of a working class which did, in fact, effect revolution.
The working class was the catalyst of the Russian revolution. There is no disagreement on this point. However, within the two main streams of Russian historiography - the Western and the Soviet - the workers' perceptions and actions have been considered of prime importance in understanding the dynamics of social and political revolution. This emphasis has been well directed but poorly utilised. The divisions and labels assigned by historians of the Russian working class have fostered a set of interpretations and conceptualisations detrimental to a full understanding of a fluid and dynamic group.

Historians such as Theodore von Laue have constructed a model of peasants in migration that presents an involuntarily displaced peasantry forced into an intensely alien and isolated urban environment.¹ Although there surely were real instances of displaced peasants, there were also many who saw the city as a positive alternative to the countryside and wilfully travelled there. Nor was the journey to the city and the initial settlement there necessarily a lonely experience for the peasant migrant. Otkhodnichestvo, begun under serfdom, had created a viable "village connection" to the city. In-migration of the peasantry to Tula had been a constant occurrence since the sixteenth century. Zemliaki were also an ever present link to the countryside and were agents of acclimatisation for newly arrived peasants in the urban setting.

In-migration to Tula tended to occur from the surrounding districts and provinces and thus a number of workers maintained a nadel in the countryside. But the possession of a nadel was neither the only nor the most important measure of ties to the countryside.

The psychological pull of the village as the agent of social security was impressively strong. The great majority of the married Tula work force could not afford to maintain their families in the city and maintained their dependants in the countryside. Workers also saw the village as the place to go when sick or dying.

Finally, because of the importance of zemliaki within the city and because of the legal ties binding the peasant to the commune as described in Chapter Three, the Tula peasant labourers were forced to maintain a continuing rural orientation within the urban setting. What this meant in practice was that the Tula in-migrant was subject to the grievances of both village and city while unable to fully settle in either environment. The duality of grievances was thus guaranteed.

Whilst the pattern of female migration is similar to that of the total migrant population of Tula, there were, however, differences between the out-migration experience of men and women. Older and younger women migrants left Tula far less frequently than men. Because a great majority of migrating women were widows or unmarried women, they had no personal right to a nadel and relinquished any claim to participation in the household by their migration. Female industrial workers were usually single and, unlike their European sisters, remained for their whole lives in the work force. J. Scott and L. Tilly's study of women's work and the family in Europe showed that the total number of women in the work force decreased with age, while in Tula its proportion increased with age.2 Although their relative numbers in the work force were increasing at the turn of the century, women continued to be employed in traditional female occupations. In these occupations, women were

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consistently paid less than their male fellows. The differences between
the experiences of men and women proved to be one of the most
fruitful conceptualisations of this study and yet, it is an area virtually
untouched by historians of Russia.

In each of the foregoing chapters the interaction between the
forces of tradition and innovation, of continuity and discontinuity, in
Russian society has been examined. We have found that habits and
attitudes changed more slowly than technology or the country's Gross
National Product, that despite the tremendous increase in factory
production in the 1890s, the patterns of people's lives remained very
much as they had been in previous decades. This is hardly surprising
and conforms to every well-known cliché about human nature. Less
predictable, however, was the peculiar intertwining which seems to
have occurred between traditional customs or institutions and
industrial change. To one degree or another the village commune,
the peasants' temporary departure in search of wages, and the close
interpersonal bonds which existed between zemliaki, came to play an
important role in everyday life at the factory. This role was a complex
one and does not easily fit the stereotypes which have been usually
accepted by historians.

The present study began by contrasting two widely accepted
"models" of Russian development: "proletarianisation" as explained
by Soviet historians, and "peasant alienation" as described by many
non-Soviet historians. Throughout the study various kinds of
evidence have been measured against these two models. Rarely, if at
all, has a perfect "fit" been found. The difficulty with both models
begins with the assumption that workers were either peasant or
"proletarian," that is, either firmly attached to the village or firmly
attached to the factory. The weight of the evidence presented in the
preceding pages suggests most workers were firmly attached to both. The relationship between village and factory can be seen as one of symbiosis. Workers travelled back and forth between city and countryside as their fortunes, or those of the national economy, rose or fell. Workers’ relatives, especially wives and children, who could not live permanently at the factory, and their neighbours, or zemliaki, aided by those who were already established at the factories, also travelled backwards and forwards. Workers whose contracts ran year-round still managed to return to the village at Easter or Christmas, and sent a substantial part of their wages back to their families. Living in two worlds, the Tula workers were influenced by both, and from this experience developed many of the characteristic traits which set them apart from the workers of other countries.

As was discussed in Chapters Five and Six, the factory world was often walled off from the rest of society as was the peasant world. Any student or other outsider who attempted to fraternise with workers risked arrest or exile from Tula. Any formal organisation which was allowed to exist at a factory was certain to be dominated by the factory’s management, and regular police surveillance ensured its activities were free of any subversive taint. Employers literally locked the gates of many factories to seal their workers off from all “contaminating” outside influences, and a work day of thirteen hours or more left the workers little time to themselves.

However, despite this isolation, there did develop a workers’ movement. As was indicated in Chapters Five and Six, strikes and other protests had become a feature of working class life in Tula, especially in periods of economic boom. Some enterprises experienced a number of strikes, as dissatisfied workers renewed their struggles and refined their tactics. In other instances, strikes exhibited certain
common characteristics indicating that grievances and tactics were communicated from one factory to another. Despite the localised, economic content of their demands, the workers' protests seem to show a sensitivity to broader trends in the national economy, and even to subtle changes in the political climate.

Such protests presuppose the existence of some kind of bond among workers, some level of communication and feeling of solidarity, and some sense of organisation. If the evidence suggests that outside agitators were not the relevant causal agent then from where do we find the source? The classical Marxist argument has been that the conditions of industrial employment, in and of themselves, serve to awaken and unify the workers. However, as we found in Chapter Six, the industries which in Marxist terms should have been the most "advanced," namely those with large, mechanised factories where workers were spiritually further removed from the countryside, had average or below average rates of labour unrest, while some which could be considered "backward," that is, those which were smaller, less mechanised, and employed workers more closely tied to the village, had much higher rates.

Even without additional evidence, the observed variations in the rates of labour unrest would suggest other influences were at work. In Chapters Three and Six, several bodies of evidence were found which point to regional loyalties, ties among persons from the same village or region of the countryside, as a major factor in promoting strikes and other protests. In some localities, a "grapevine" of zemliaki disseminated news of working conditions and protests. In others, "clusters" of zemliaki formed a nucleus from which larger strikes grew. Industries and localities which obtained their workers from a single region were found to have significantly higher rates of
unrest than those utilising a more diverse and fragmented work force.

If the peasant village did exercise a positive influence on the course of labour protest, the question must be asked what has become of the "patriarchalism" which so many Soviet historians have imputed to the peasantry. And what of the "primitive, elemental buntarstvo" which so many Western historians have emphasised? The village can now be seen to have contributed to the workers' sense of organisation and self-discipline, in ways which confound the established stereotypes. Zemliak ties appear to have brought workers together to share their grievances and focus their protests. In the incidents which subsequently followed, some of the peasants' traditional beliefs and suspicions found expression. Their distrust of officialdom, their demand for "justice" instead of the imposition of the narrow letter of the law, their sense of outrage at long-standing abuses, all these themes of worker protest had been heard in the countryside for decades. In this way, too, the countryside might have given impetus to the workers' movement.

To this contention, however, a contrary argument can be put: If the workers' rural background was a primary cause of their unrest, why did the strike movement begin so late in Tula? Surely the workers of the 1860s and '70s were just as closely tied to the countryside as those of the '80s and '90s? Yet the rates of protest of the former were comparably lower. Why was this so? In the first place, as was noted in Chapter Two, the number of workers and factories was greater in the last two decades of the nineteenth century than at any previous time. Indeed, the factory population had almost doubled during the years covered by this study, so that some increases in the number of strikes and protests should not be of any surprise. In the
second place, as was mentioned in Chapter Five, the number of protest incidents was greatest in years of rapid economic expansion and lowest in times of depression. The years of the present study fall mostly into the former category, especially during the period 1895 to 1900, when the most rapid industrial growth and the greatest number of incidents took place. The preceding two decades were characterised by slower growth and a higher degree of uncertainty in the national economy. In the third place, the rate of social unrest in the countryside, as expressed in acts of open disobedience and clashes with governmental authorities, fell sharply after 1861 and did not begin to rise again until the 1890s. The peasants, no matter how much they might have resented the terms of Emancipation, were either unable or unwilling to continue the widespread disorders which characterised the years 1855 to 1861. It is possible that for this reason the peasant migrants of the 1860s and '70s came to the factories in a more acquiescent mood, and that the militancy of later decades developed slowly as the impoverishment of the village increased. Although the issue of unrest in the villages is clearly outside the bounds of the present study, peasant militancy did increase around the turn of the century, and continued to grow until the revolutionary outbursts of the period 1905 to 1907. The provinces with the highest rates of unrest in those years included several which had only recently begun to send large numbers of migrants to the factories. If, as has been argued, migration really was a two-way street, then perhaps it contributed to the spread of revolutionary discontent and activism in the countryside. We often read of the citified peasants returning home to the village with shining boots and an accordion, the tokens of a new life-style. Perhaps they also brought back ideas of organisation and change.
It is not suggested then, that the countryside was the only source of labour unrest in the factories but rather that it was the combination of factory experience with the still vital customs and habits of peasant society which produced a particular kind of unrest. It seems quite reasonable to suppose that results of such a combination would be found in the countryside as well as in the industrial centres.

Having noted some of the ways in which factory-village ties appear to have promoted organisation and protest, the limits which they imposed must also be recognised. The same bonds which held worker-peasants together also might have acted as one more barrier between those workers and the rest of society. To the extent that peasants formed a closely-knit community at the factories, they also constituted a "world apart," a world which outsiders had great difficulty in penetrating. The mass of workers was often suspicious towards outsiders, and even towards the better-educated "worker aristocracy" who had severed ties with the village. Workers might have accepted leaflets or other logistic support from members of the intelligentsia during strikes but they also insisted on defining their own grievances, slogans, and goals. A deeply rooted suspicion towards all intellectuals was a recurring theme throughout the years of this study and in the years beyond.3 This insularity and isolation of the peasant worker was almost surely an outgrowth of traditional peasant attitudes, carried over into a factory setting by the ties described above.

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The insularity of the worker-peasant world also might have discouraged workers and peasants from forming broader, more cohesive protest movements. Although ideas and tactics seem to have spread from place to place, the Tula labour movement shows no clear-cut examples of coordination of workers in different localities presenting a united front against employers or governmental authorities. Instead, strike action hit the factories one by one, just as happened a few years later when the peasant villages rose up one by one to defy the landlords and the State. It would appear that the workers' collective consciousness was not a class consciousness, not an allegiance to all other workers but to specific groups of them, groups which were defined at least in part by zemliak ties.

Looking ahead to 1905, 1917 and beyond, it can be argued that the revolutionary movement possessed many of the characteristics of earlier years. The workers and peasants of these years demonstrated the same militancy and ability to organise in protest as their forbears. Once again, however, we find their strength was greatest when applied to local issues, and to negative ones. The spontaneous actions of the masses were capable of toppling the Old Regime but the task of social reconstruction and transformation proved to be quite a different matter. The workers and peasants, as a result of their shared experiences over the preceding half-century or more, did show a distinct set of demands, concerns, and goals. However, these were mostly concerned with issues of decentralisation and fragmentation, such as "worker control" at the factories, and confiscation and redistribution of gentry land to the villages. However, workers and peasants did not constitute a distinct and organised force at a national level, and power soon began to gather about other centres. The gap between would-be leaders and the worker masses remained as wide as
ever. Ultimately, as has happened so many times before in Russia's history, that gap was bridged by coercive measures of the most extreme sort.
GLOSSARY
Russian currency of the sixteenth and seventeenth centuries:

1 rouble = 100 kopecks = 200 dengi
1 grivna = 20 dengi
1 altyn = 6 dengi
1 poltina = 50 kopecks
1 polupoltina = 25 kopecks

Some Russian Weights and Measures of the sixteenth to nineteenth centuries:

Linear Measures

Sazhen = 2.13 metres, about 7 feet
Verst = 1.067 kilometres, about 0.663 miles (about 3500 feet)

Weights and Volumes

Pud = 16.381 kilograms
played a very important role in Muscovite institutions, as well as in diplomatic relations with other countries.

**Dogovornyi zapis.** "Agreement document;" a contract between a capitalist and his employees stating wages, conditions of work, etc.

**Efimok (efimki).** Russian term for the German silver thaler (*Joachimsthaler*), which had originated in Bohemia in the sixteenth century and was the most common larger coin in seventeenth century Russia. Under Aleksei Mikhailovich, Joachimsthalers were often counterstamped with Russian symbols and then circulated as Russian coin.

**Gramota.** In seventeenth century Russia, a written document.

**Grazhdanin.** Hereditary honorary citizen. Title conferred in tsarist Russia on persons not of gentle birth for services.

**Gubernia.** Province. A major administrative division of imperial Russia. Each gubernia was divided into several (on average about ten) districts or "uezdy." At the beginning of the twentieth century there were fifty gubernias in European Russia not including Finland, Poland, and the Caucasus.

**Izba.** Usually a smaller building, as indicated by such English words as "hut" or "cottage."

**Kazennyi dvor (Kazennyi prikaz).** Literally "the Treasury court," 1512-1700. The tsar's own treasury. Provided the royal family's wardrobe, personal articles, and utensils, and managed the sovereign's textile enterprises (satins, velvets, taffetas, silks, etc.). Also supervised the state fur trade monopoly.

**Konforka.** Crown, top ring on samovar.

**Korm.** Literally, "fodder," "forage," "food." In Russian industry it signified a periodical cash allowance (usually daily) for food.

**Krai.** A small area of land, an administrative area.

**Kruzhok.** Circle; study group.

**Kustar.** Artisan; handicraftsman. Peasant engaged in domestic or cottage industry.

**Kustarnye promysly.** Cottage industries, an important branch of Russian economic life. They were developed especially in the central provinces, where the poor soil could not provide the peasants with sufficient subsistence. By the end of the nineteenth century the textile cottage industry was most highly developed in the provinces of Moscow, Vladimir, and Tver', the metalworking industry (production of knives, locks, nails, etc.) in the province of Nizhnii Novgorod, and the woodworking industry in the northern provinces.

**Kuznets.** Artisan blacksmith. *Kuznitsa*, forge shops (smithy forge) having hearths but usually not water-driven hammers.

**Letopis.** Chronicle; annals. Representing various styles and viewpoints, the letopisi provide valuable and often vivid information not only about religious but also political and military events.
Manufactory. The manufactory (manufaktura) was a larger-scale, commodity-producing enterprise that differed from the earlier artisanal workshop by its use of power derived from water falling through a sluice onto a water wheel that in turn powered machinery within the enterprise. Mechanical bellows and hammers enabled ironsmiths to produce much higher quality metal while such enlarged tools and machinery necessitated a concentration of both capital and workers due to the expense of the machinery and the requirement for numerous operators. The term zavod (factory) is often used to describe these new manufactories.

Meshchanin, meschane. In the nineteenth century it designated only the lower groups of the city population, the petty tradesmen, craftsmen, and the like.

Nadel. Allotment; landholding especially after the emancipation of the serfs in 1861.

Oblast. An old Russian word referring to “land,” “area,” “territory.” Under the Petrine territorial reforms early in the eighteenth century, okrugi formed oblasti (pl.), which in turn comprised gubernii.

Obrok. A cash payment. When it involved payment from a subject to the tsar, obrok might be understood as tax; from a peasant to his lord, “quit rent” (cf. barshchina); from a factory owner to a landlord for use of land, “rent.”

Okhoche liudi. Literally “willing people,” “volunteers.” Peasants offering to work at a factory, sometimes for lower wages than those already being paid for a particular type of work.

Oruzheinaia palata. The “armaments palace,” an armory established early in the sixteenth century in Moscow to produce sidearms and hand firearms. Closed in the 1720s.

Otkhod. Literally “going away;” term applied to temporary migration by peasants in search of employment.

Pemeshchik (Pomeshchiki). The holder of a pomeste (pomestia), which were small landed estates given as fiefs to lesser noblemen and retained by them through continuous military service to the tsar. Already a widely developed form of land tenure by the sixteenth century; by the mid-seventeenth century these holdings had, in effect, become patrimonial. (cf. vochinnik).

Pistsovye knigi. Systematic compendiums of documents on economic matters prepared in Russia during the fifteenth through seventeenth centuries. The pistsovye knigi served as the basis for assigning land taxes through soshnye pisma (census documents that assessed arable land). The pistsovye knigi begun in 1581 and completed in 1592-93 became the basic document for determining the lord's proprietary rights over individual peasants. Pistsovye knigi were compiled for populated areas. Cities were described in terms of their fortifications, churches, shops, number of households, and
population. Districts (uezdy) and their constituent administrative units (strany and volosti) were distinguished, and each village and town was described separately. The pistsovoye knigi gave detailed descriptions of ploughlands, hayfields, and forests. They concluded with statistical summaries.

Pochetnyi grazhdan. Honourable citizens, both hereditary and personal; a particular legal class (soslovie) established by Nicholas I’s manifesto of April 10, 1832. It included government officials and persons with higher education who did not belong to the nobility, the upper group of merchants and industrialists, and the legitimate children of personal nobles. The members of this class enjoyed freedom from the soul tax, military conscription, and corporal punishment.

Poddatnye liudi. Workers provided by the tsar for unskilled work at a factory, etc.

Pomestia. Small landed estates given as fiefs to lesser noblemen and retained by them through continuous military service to the tsar; by the mid-seventeenth century these holdings had, in effect, become patrimonial.

Posad. Suburb; settlement. A particular area or part of a city containing individuals (e.g. artisans) who were free, tax-paying subjects of the tsar.

Posolskii prikaz. Foreign office, 1549-1720. Chancellery which conducted diplomatic relations with foreign governments.

Prikaz. Chancellery; office; department; ministry. Prikazy were central government bodies which (i) handled various affairs of state (e.g. the posolskii prikaz, the foreign office, conducted diplomatic relations with foreign states); (ii) managed the affairs of a given part of the country (e.g. sibirskii prikaz, the Siberian chancellery); and (iii) attended to personal affairs of the tsar or directed his economic interests (e.g. prikaz tainykh del, kazennyi prikaz). Normally headed by a boyar and staffed by diaki and podiachie. The prikaz system crystallised by the mid-sixteenth century; despite consolidations and reforms (especially in 1680), the prikazy were not planned or coordinated and were often characterised by overlapping function and authority. There were forty-two prikazy by the mid-seventeenth century. Replaced by the college system of Peter I early in the eighteenth century.

Prikaz bolshoi kazni. Grand Exchequer, 1621-1718. Supervised collection of direct taxes from the urban merchant-artisan population, directed money affairs and certain royal industrial enterprises and activities; after 1680 collected bar taxes and trade duty.

Prishly. Newly come; arrived.

Pushechnik. A cannon caster.

Pushechnyi dvor. “The cannon yard,” an armaments enterprise established in Moscow in 1479 by Aristotle Fioraventi. State-
owned, based upon pre-manufacturing technology. Also called *pushechnaia izba* (the cannon house).

**Pushkarskii prikaz.** Cannon prikaz, 1577-1700. Office which directed affairs pertaining to the import and maintenance of cannon, construction of forts, engineering projects, etc. The *pushkarskii prikaz* normally organised and managed artisan works on the model of the *pushechnyi dvor*, and was sometimes involved in the operation of iron manufactories.

**Rudokop.** Miner.

**Sloboda, slobody.** Settlement or group of settlements exempt for a number of years or permanently from the ordinary taxes and work obligations.

**Soslovie, iia.** Estate; a social class with a special legal status.

**Sotnia.** In Moscow the wealthiest group of merchants was called *Gosti*, next in line were the *gostinaia sotnia* and the *sukonnaia sotnia* (clothiers); these groups within the Moscow merchant class were not self-organised but were formed by the government; its agents periodically recruited in provincial cities and transferred to Moscow the wealthier and more reliable local merchants for such services as *Golovy* (directors) or *Tseloval’niki* (sworn assistants) in collecting government revenues and in managing the tsar’s (the state’s) trading operations.

**Sovmestitel.** Literally a “pluralist.” A master employed in two or more specialties.

**Stolnik.** Literally “courtier of the table.” Administrative officials of the middle rank, *stolniki* (pl.); might assist a boyar in directing a *prikaz* or attend to the tsar during receptions of foreign dignitaries, etc.

**Strelets (Streltsy).** From the Russian verb “streliat,” to shoot. The *strelets* were professional soldiers, “musketeers,” also armed with swords, pikes, and battle-axes. Some were mounted but most were infantrymen. From the time of their introduction by Ivan IV, they enjoyed special commercial rights and received homes, plots of land, and salaries in money and grain. A *strelets* regiment was commanded by a *golova*. Sometimes they might be assigned by the state to entrepreneurs for fairly menial industrial services.

**Streletskii prikaz.** In Muscovy, also the term for units - regiments or battalions - of the Streltsy commanded by *Golovy* or *Polkovniki*. In the city of Moscow in the 1660s there were more than twenty *streletskie prikazy*, each numbering between 800 and 1,000 men.

**Stvolnyi zavarshchiko.** A barrel borer.

**Uezd.** Administrative unit of local government; cf. *volost*.

**Ukaz.** English *ukase*. A royal edict having the force of law.

**Voevoda (Voevody).** An important military as well as administrative official in medieval Russia, usually a high-born member of the aristocracy. A *voevoda* governed a *uezd* from the principal
town of the uezd; in the event of a mobilisation, a voevody led regiments of provincial services gentry and their peasant soldiers during the campaign.

Volost. An administrative unit in Russia comprising several villages. Several volosti (pl.) formed an uezd. Each uezd had a town as its centre and was governed from there by a voevoda. Tsar Mikhail inaugurated a move toward administrative centralisation by consolidating uezdy (pl.) into larger territorial units, razriady. This policy aimed at a better organisation of national defence, and was continued by Aleksei Mikhailovich.

Votchinnik (Votchinniki). The holder of a votchyna (votchiny), which from early times were large patrimonial estates held without service obligation to the sovereign. (cf. alodial land tenureships of medieval Western Europe). By the sixteenth century, however, the services of votchinniki to the state were scarcely fewer or less burdensome than those obtained from pomeshchiki.

Zemliachestvo, -va. An association of compatriots (zemliaki), especially of workers from the same province, city or village.

Zubatovshchina. A term applied to an experiment in police socialism early in the twentieth century. S. V. Zubatov, the chief of the Moscow security police, set up in 1901-02, with government permission and using secret police agents, labour organisations in the form of mutual aid associations to promote the economic and educational needs of their members. The object was to assist the workers in their economic struggle (including the use of strikes against the manufacturers) and, by improving their economic conditions, to withdraw them from the influence of revolutionary propaganda. Zubatov’s undertaking achieved some success. (Similar workers’ associations were established outside Moscow, as in Odessa and Minsk.) But soon the movement met with bitter opposition from both the revolutionary intelligentsia and the manufacturers, and in 1903 the government dropped the whole venture.
CHRONOLOGY
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1146</td>
<td>First reference to Tula in the Chronicles.</td>
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<tr>
<td>1147</td>
<td>First reference to Moscow in the Chronicles.</td>
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<tr>
<td>1237</td>
<td>Invasion of Rus by Batu-Khan and the beginning of the Tatar yoke (1237-1480).</td>
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<tr>
<td>1252</td>
<td>Moscow established as an independent feudal hereditary principality.</td>
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<td>1360</td>
<td>Tula under the control of Tatar Tsarina Taiduly.</td>
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<tr>
<td>1380</td>
<td>8 September - Kulikovo Battle. Historic battle between the Russian forces led by the Grand Prince of Moscow and Vladimir Dmitrii Ivanovich Donskoii against the Mongol-Tatars headed by the ruler of the Golden Horde, Mamai. The battle took place on Kulikovo field - Kurkinskii district, Tula province.</td>
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<tr>
<td>1381</td>
<td>Tula becomes part of Moscow principality.</td>
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<tr>
<td>1382</td>
<td>A treaty concluded between Moscow Prince Dmitrii Ivanovich Donskoii and Riazan Prince Oleg over control of Tula.</td>
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<tr>
<td>1403</td>
<td>Tula becomes part of Riazan principality.</td>
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<tr>
<td>1480</td>
<td>Overthrow of Tatar yoke by Moscow government.</td>
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<tr>
<td>1503</td>
<td>Tula becomes part of Muscovite state.</td>
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<td>1509</td>
<td>A wooden fortress built in Tula.</td>
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<td>1514-1520</td>
<td>Tula kremlin constructed.</td>
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<td>1517</td>
<td>Incursions by Crimean Tatars.</td>
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<td>1533-1584</td>
<td>Ivan IV assumes the title &quot;Tsar&quot; (1547).</td>
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<td>1552</td>
<td>22-24 June - Siege of Tula by Crimean Tatar khan Devlet-Gerei.</td>
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<td>1555</td>
<td>Tsar Ioanna IV Vasilevich visits Tula.</td>
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<tr>
<td>1559/1591/1592</td>
<td>Incursions by Crimean Tatars.</td>
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<tr>
<td>1595</td>
<td>Tula armaments slobody constructed - thirty gunsmiths resettle in Tula.</td>
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<tr>
<td>1598</td>
<td>End of the Rurik dynasty.</td>
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<td>1607</td>
<td>June-October - Peasant rebel leader I.I. Bolotnikov forces besieged in Tula by army of Tsar Vasilii Shuiskii.</td>
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<tr>
<td>1607-1608</td>
<td>Earliest records of a metalworking industry in the village of Pavlovo.</td>
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<td>Year</td>
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<tr>
<td>1611</td>
<td>Formation of a Tula militia.</td>
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<td>1613</td>
<td>Invasion of Tula and Aleksinskii districts by Getman Lisovsk.</td>
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<td>1619</td>
<td>Law regulating Tula artisans.</td>
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<td>1621</td>
<td>First invitation to master &quot;ore experts&quot; from abroad.</td>
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<td>1625</td>
<td>Prince Voin-Krapotkin orders the writing of Tula's history. Tula's first <em>pistolovye knigi</em>.</td>
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<td>1630</td>
<td>Establishment of the first ironworks beyond the Urals (near Irbit).</td>
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<tr>
<td>1632</td>
<td>29 February - Dutch entrepreneur Andrei Vinius granted a concession by Tsar Mikhail Fedorovich to build a water powered iron forging factory on the Tulitsa river near Tula. The factory commenced operations in 1637.</td>
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<tr>
<td>1644</td>
<td>Permission granted to Marselius and Akema for the establishment of ironworks along the Vaga, Sheksna, and Kostroma rivers.</td>
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<td>1647</td>
<td>Kazan cathedral constructed in Tula.</td>
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<td>1651</td>
<td>Founding of Vedmenskikh steel works.</td>
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<td>1652</td>
<td>Establishment of a settlement in Moscow for foreign master craftsmen.</td>
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<td>1653</td>
<td>Establishment of a leather tannery and soap factory.</td>
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<td>1668</td>
<td>Erection of the Vepreisky iron mill - Tula region.</td>
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<td>1670-1671</td>
<td>Peasant uprising under the leadership of Stepan Razan.</td>
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<td>1685</td>
<td>Prince Vadbolskii orders the writing of Tula's history. Survey of artisan <em>sloboda</em>.</td>
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<td>1689-1725</td>
<td>Reign of Peter I (sole ruler from 1696).</td>
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<td>1695</td>
<td>Peter I the Great visits Tula.</td>
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<td>1698</td>
<td>Invitation to foreign master craftsmen for metallurgical works.</td>
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<td>1699</td>
<td>Peasants forbidden to engage in trade and industry except as members of urban settlements.</td>
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<tr>
<td>1699</td>
<td>Establishment of first blast-furnace type of ironworks on the Neiva River in the Urals by Vinius.</td>
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<tr>
<td>1701</td>
<td>18 January - Construction of a private armaments factory. Peter I authorises Nikita Demidov to construct an iron-works in Tula.</td>
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<tr>
<td>Year</td>
<td>Event</td>
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<tr>
<td>1703</td>
<td>Founding of St. Petersburg.</td>
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<td>1705</td>
<td>Promulgation of an order regarding Tula armament workers.</td>
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<td>1708</td>
<td>Tula province formed.</td>
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<td>1712</td>
<td>Decree of Peter I establishing an arsenal at Tula.</td>
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<td>1712-1713</td>
<td>Construction of state armaments factory in Tula. Commences operation on 10 January 1714.</td>
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<td>1720</td>
<td>Decree prohibiting factory owners to retain workers &quot;without documents.&quot;</td>
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<tr>
<td>1721</td>
<td>Peter I assumes the title of Emperor.</td>
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<td>1721</td>
<td>Decree permitting merchants to buy peasants for factories on equal terms with nobility.</td>
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<td>1721</td>
<td>Decree releasing factory owners from &quot;urban services.&quot;</td>
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<td>1722</td>
<td>Establishment of guilds and crafts.</td>
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<td>1722</td>
<td>Promulgation of table of ranks.</td>
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<td>1722</td>
<td>Prohibition on return to their owners of runaway peasants employed on industrial enterprises.</td>
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<tr>
<td>1725-1727</td>
<td>Reign of Catherine I.</td>
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<td>1726</td>
<td>Abrogation of the rights of serfs to depart into industry.</td>
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<td>1736</td>
<td>Decree prohibiting factory owners to acquire villages with land.</td>
</tr>
<tr>
<td>1739</td>
<td>Decree transferring state-owned ironworks to private owners.</td>
</tr>
<tr>
<td>1746</td>
<td>6 August - Birth of Vasilii Alekseevich Levshin in a village called Temrian, near Belev. Russian writer and translator and the first researcher of the Tula region.</td>
</tr>
<tr>
<td>1746</td>
<td>Ban on purchase of serfs by non-nobles.</td>
</tr>
<tr>
<td>1751</td>
<td>Birth of Kozma Semenovich Sokolnikov. Russian architect and designer of the construction and subsequent rebuilding of the Tula armaments factory - 1770-1790.</td>
</tr>
<tr>
<td>1752</td>
<td>Disturbances at the linen factory of Tula artisan L.I. Lugunin.</td>
</tr>
<tr>
<td>1762</td>
<td>Purchase of peasants for factories by non-nobles prohibited.</td>
</tr>
<tr>
<td>1762-1764</td>
<td>Uspenskii cathedral constructed within the confines of the Tula kremlin.</td>
</tr>
<tr>
<td>Year</td>
<td>Event</td>
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<tr>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1763</td>
<td>Foreigners permitted to buy serfs for factories.</td>
</tr>
<tr>
<td>1767</td>
<td>Birth of Aleksii Mikhailovich Sumin. Russian mechanic and supervisor of arms manufacture in Tula armaments factory.</td>
</tr>
<tr>
<td>1771</td>
<td>Plague in Tula.</td>
</tr>
<tr>
<td>1773-1775</td>
<td>Peasant war under the leadership of Pugachev.</td>
</tr>
<tr>
<td>1774</td>
<td>11 August - Tula armaments office announces contingency plans in the event The Pugachev rebellion reaches Tula.</td>
</tr>
<tr>
<td>1775</td>
<td>Catherine II visits Tula.</td>
</tr>
<tr>
<td>1777</td>
<td>An ukase of Catherine II in 19 September divides Tula province into twelve districts.</td>
</tr>
<tr>
<td>1778</td>
<td>First samovar workshop opened in Tula by Ivan Lisitsin.</td>
</tr>
<tr>
<td>1779</td>
<td>An ukase of Catherine II ratifies the official plan for the city of Tula. Birth of Pavel Dmitrievich Zakhavo - Russian inventor and constructor and creator of several machine tools for armaments manufacture. From 1810-1839 he worked as a mechanic in the Tula armaments factory.</td>
</tr>
<tr>
<td>1781</td>
<td>First public school established in Tula.</td>
</tr>
<tr>
<td>1784</td>
<td>A printing house established in Tula.</td>
</tr>
<tr>
<td>1786</td>
<td>22 September - Principal national school opens in Tula.</td>
</tr>
<tr>
<td>1787</td>
<td>Catherine II visits Tula.</td>
</tr>
<tr>
<td>1796-1801</td>
<td>Reign of Paul I.</td>
</tr>
<tr>
<td>1796</td>
<td>Tula named as capital of Tula province.</td>
</tr>
<tr>
<td>1797</td>
<td>June-September - Disturbances amongst tied Tula armaments workers against attempts to reorganise armaments manufacture.</td>
</tr>
<tr>
<td>1797</td>
<td>Founding of Tula guberniia.</td>
</tr>
<tr>
<td>1798</td>
<td>Permission granted to factory owners to purchase peasants for industrial enterprises.</td>
</tr>
<tr>
<td>1800</td>
<td>Opening of Tula diocese and Tula seminary.</td>
</tr>
<tr>
<td>1801-1825</td>
<td>Reign of Alexander I.</td>
</tr>
<tr>
<td>1802</td>
<td>Opening of Russia's first beet-sugar mill in Tula by Blankenagel. Founding in Tula of a military school for members of the nobility.</td>
</tr>
</tbody>
</table>
1803
30 June - Regulations on factory labour and on the rights of owners of serf-labour factories.

1804
7 August - The opening of a boys high school in Tula.

1812
21 July - The formation of a Tula militia for the Patriotic War of 1812. 8 September - Tula receives an order from M.I. Kutuzov head of the Russian army to halt the evacuation of the armaments factory to Izhevsk.

1815
September - the first steam engine installed at Tula armaments factory.

1815-1817
Disturbances amongst Tula armaments workers over low wage rates and a ban by factory authorities on allocating steel for domestic production.

1823
Opening of a school for the children of armament workers.

1824
Owners of the serf-labour factories granted the right to set peasants free.

1825
Landowners forbidden to lease peasants out to factories owned by "commoners."

1825-1855
Reign of Nicholas I.

1825
14 December - Decembrists Uprising.

1828

1832
Tula armament workers Sizov and Shkunaev construct an accordion.

1834
29 July and 5 September - Severe fires ravish Tula causing substantial damage estimated at fourteen million roubles.

1835
Factory legislation for serfs: "Code" on relations between factory owners and workmen.

1835-1843
Tula rebuilt after the fires of 1834 - including the armaments factory. Architect V.I. Fedoseev planned the reconstruction.

1837
Disturbances amongst workers in enterprises of Tula province.

1838
First issue of Tula newspaper Gubernskie Vedomosti appears.

1841
First school for women opened in Tula with an enrolment of fifty.

1845
Opening of a highway connecting Tula and Moscow.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1847</td>
<td>Opening of a highway connecting Tula and Orlov.</td>
</tr>
<tr>
<td>1849</td>
<td>Memorial commemorating the Kulikovo Battle erected on Kulikovo field.</td>
</tr>
<tr>
<td>1851</td>
<td>22 August - The first agricultural exhibition for Tula province is held in Tula.</td>
</tr>
<tr>
<td>1855-1881</td>
<td>Reign of Alexander II.</td>
</tr>
<tr>
<td>1858</td>
<td>Peasant disturbances in Tula province.</td>
</tr>
<tr>
<td>1861</td>
<td>8-12 March - The Emancipation of the Serfs decree is publicised in Tula provincial cities and villages.</td>
</tr>
<tr>
<td>1864</td>
<td>17 May - Emancipation of Tula armament workers from compulsory labour.</td>
</tr>
<tr>
<td>1868</td>
<td>Opening of the Moscow-Kursk railway line via Tula.</td>
</tr>
<tr>
<td>1873-1875</td>
<td>Industrial crisis in Russia.</td>
</tr>
<tr>
<td>1875</td>
<td>Members of the populist circle “Moskvichei” distribute material amongst Tula workers.</td>
</tr>
<tr>
<td>1880</td>
<td>Peasant unrest in Tula province.</td>
</tr>
<tr>
<td>1881-1894</td>
<td>Reign of Alexander III.</td>
</tr>
<tr>
<td>1881-1882</td>
<td>Industrial crisis in Russia.</td>
</tr>
<tr>
<td>1882</td>
<td>Beginning of factory laws in Russia, the law of 1 July, limiting night work of minors.</td>
</tr>
<tr>
<td>1882</td>
<td>Establishment of factory inspection system.</td>
</tr>
<tr>
<td>1883</td>
<td>Cartridge factory opens in Tula.</td>
</tr>
<tr>
<td>1885</td>
<td>Law for the regulation of night work of adolescents and women.</td>
</tr>
<tr>
<td>1885</td>
<td>A relief society for masters and workers was formed at Tula cartridge factory.</td>
</tr>
<tr>
<td>1885</td>
<td>Strike at the Morozov factories in Orekhovo-Zuyevo and Ivanovo-Voznesensk.</td>
</tr>
<tr>
<td>1886</td>
<td>Law on supervision of factory establishments.</td>
</tr>
<tr>
<td>1890</td>
<td>Curtailment of laws of 1882-1885 outlawing night work for minors and women.</td>
</tr>
<tr>
<td>1891</td>
<td>September. Strike at the cotton-spinning factory of E.S. Kariakin, Kashirskii uezd, Tula province.</td>
</tr>
<tr>
<td>1891-1892</td>
<td>Famine throughout twenty-one provinces of European Russia.</td>
</tr>
</tbody>
</table>
1891-1892 Marxist circle originates in Tula.
1894-1917 Reign of Nicholas II.
1895 Foundation of Tula park.
1896 September. Strike at the sugar-refinery of Tereshchenko in Tula.
1897 First Russian census.
1897 Decree on the length and distribution of working hours in factory establishments (eleven hours and thirty minutes).
1898 June. Strike at the cement works of R. Gill Krapivenskii uezd, Tula province.
1898 October. Strike at the samovar factory of Batashev, in Tula.
1898 First Congress of the Russian Social Democratic Labour Party (RSDLP).
1898 Social-democratic group originates in Tula.
1899 March. Strike at the cartridge factory in Tula.
1900 January. Strike at the samovar factory of Batashev in Tula.
1901 A committee of the RSDLP created in Tula.
1903 Worker demonstration in Tula.
1905 3 January - Strike at the Putilov plant at St. Petersburg (beginning of the general strike and general revolutionary movement).
1905 17 October - Manifesto on the convocation of a "legislative" State Duma and on "constitutional freedoms."
1905 January - Strikes in the cartridge factory and other enterprises in Tula.
July - Strike in cartridge factory. 
October - Strike amongst railway workers. 
21 October - Massacre of workers demonstration in Tula.
1914 19 July - Beginning of First World War.
1915-1917 Growth of strike movement (in St. Petersburg, Moscow, Kostroma, Ivanovo-Voznesensk, Tver, at the Tula and Bryansk factories, in Baku, the Donbass, and so forth).
1915 June - Strikes in cartridge factory.

1916 January - Strikes in cartridge factory.

1917 January-February - Strikes in armaments factory - the first strikes in the history of the factory.


1917 2 March - Fall of the monarchy and formation of the provisional government.

1917 3 March - Formation of Tula Soviet and Workers' Deputies.
BIBLIOGRAPHY
Workers did not vote, seldom wrote diaries or memoirs, and did not bestow the historian with many sources which directly registered their major concerns. However, valuable data on collective protests, births and deaths, strikes, and other activities do exist. To a degree, this study is a quantitative one in order to describe the workers' everyday life and their response to the impact of industrialisation in the latter half of the nineteenth century.

The first serious attempt to compile information about the factory population as a whole came with the establishment of a factory inspectorate by the law of 1 June 1882. The forty-eight European Russian gubernii (provinces) were arranged into nine factory okrugi (districts), each one under the supervision of an inspector and a small staff of technical assistants. The results of their efforts were published in 1886. For Tula, see I.I. Ianzhul Otchet za 1885g. fabrichnogo inspektora Moskovskogo okruga. St. Petersburg: 1886. Ianzhul was the first Regional Factory Inspector of the Moscow Industrial Region (the name Moscow was also occasionally given to the entire Central Industrial Region, an area of manufacturing activity defined by the Factory Inspectorate to include the provinces of Moscow, Iaroslav, Kaluga, Kostroma, Nizhnyi-Novgorod, Riazan, Tula, Tver, and Vladimir) who later became Professor of Factory Law at Moscow University. He left the Inspectorate in 1887. However, it was not until the promulgation of the law of 3 June 1886, that the functions of the Factory Inspectorate were fully elaborated. In this law, the Inspectorate was charged with examining and approving wage rates and rules of internal factory order, adopting measures to prevent disputes and misunderstandings between factory owners and workers, and

We must be wary when dealing with Russian labour statistics, especially in the prerevolutionary period, as numerous flaws and inconsistencies abound. For example, no one in the nineteenth century or in the early twentieth century for that matter could decide on the definition of a "factory," so from one set of data to another the definition might vary from a small unmechanised workshop to an enterprise employing thousands of workers and utilising sophisticated machines. Often the data do not address the same questions, so comparisions from one year to the next or between regions are impossible. Nonetheless, from the mid-1880s there is sufficient qualitative and quantitative improvement in the data to construct a reasonably accurate and reliable picture for some areas of Russia and to discern unmistakable overall trends. Of course, as the picture becomes more detailed, it also becomes more complicated. What is true of urban factories which existed is not always true of rural ones. What can be said of one rural area with some concentration of industry often cannot be said of another, owing in part to differences in agricultural productivity, in the types of industries, and in the division between local and migrant labour in the two areas. These variables and others influence the numbers, age, and marital status of workers, and help explain why and how workers were drawn to the factories.

Another important task of the Factory Inspectorate was to collect data on factories and the factory labour force. The government found the factory inspectors' reports of 1885 so critical of the
conditions under which workers lived and laboured that subsequent reports were not published until 1900. From 1900 to 1914 the reports were published again, but only as a *Svod*, or *Summary*, for all European Russia. See the annual *Svod otchetov fabrichnykh inspektorov*, St. Petersburg: 1900-1915; the *Spisok fabrik i zavodov evropeiskoi Rossi St. Petersburg: 1903*; and the *Spisok fabrik i zavodov Rossii 1910 g. Po ofitsialnym dannym fabrichnogo, podatnogo i gornogo nadzora* Moscow, St. Petersburg, Warsaw: n.d.

**Population Statistics**

Only one general census was taken of the entire population of the Russian Empire. This was the 1897 census, *Tsentralnyi statisticheskii Komitet* (*Pervaia vseobshchaia perepis naseleniia Rossiiskoi Imperii 1897g.*.) 89 vols. St. Petersburg: 1899-1904. A convenient demarcation date for a review of the statistical data on the population is 1858. This was the year in which the Central Statistical Committee *Tsentralnyi Statisticheskii Komitet* was officially established under the auspices of the Ministry of Internal Affairs *Ministerstvo Vnutrennikh Del*. With the establishment of the Central Statistical Committee, the compilation and publication of statistical information on the population acquired a certain measure of accuracy, uniformity, comparability, and regularity which was not entirely the case for the first half of the nineteenth century. Until the middle of the century, the determination of the population and its composition was based primarily on the periodic registrations undertaken by the government called *revizii* (*reviziia*, singular) or revisions. Initiated by Peter the Great in 1718 for the purpose of registering the male population of the empire subject to a poll tax, or
more precisely, a "soul tax," ten revizii were carried out: five in the eighteenth century (1719, 1744, 1762, 1782, and 1794) and five in the nineteenth century (1811, 1815, 1833, 1850, and 1856). Since the principal objective of the revizii was fiscal, they did not enumerate the entire population. Only those classes liable to the poll tax, mainly peasants and common citizens, were registered while only part of the non-taxed categories were included. With the formation of the Central Statistical Committee in 1858 a new system was introduced for the determination of the population to replace the revizii. The new method of calculating the population was based on three independent all-Russian registrations of the population, carried out in 1858, 1863, and 1884-1885, and one general census of the population in 1897. The collection of materials in the general registrations was entrusted to the urban and rural police according to units of administration. The provincial statistical committees processed the materials and checked them with results of the calculations made by the governors and with the data from the previous registration. The final compilation of all the information received and the correction of errors were then entrusted to the Central Statistical Committee.

**Newspapers and Journals**

Newspapers from virtually all of the Russian Empire's larger cities can be examined at the State Lenin Library in Moscow. For Tula see: *Tulskie gubernskie vedomosti* - 1838-1917, daily (twice weekly from 1870 - daily from 1895 - twice weekly from 1907). *Gubernskie Vedomosti* (Provincial Reports), was the name of official government newspapers of tsarist Russia published in provinces and oblasts. In the latter instance, they were called *Oblastnye vedomosti* (Oblast
Reports). A Senate decree on the publication of *Gubernskie vedomosti* (initially published in six provinces) was issued in October 1830, but it was not implemented. A statute of 1837 called for the publication of *Gubernskie vedomosti* in all provinces. The paper consisted of two parts: an official section, which carried decrees and orders of the authorities, as well as government announcements, and an unofficial section, which contained local news, information about natural phenomena, commerce, agriculture, industry, educational institutions, history, and private announcements. The publication of the *Gubernskie vedomosti* was wholly entrusted to the provincial administration. In 1838, these newspapers were published in forty-two provinces. Later, at various times they made their appearance in most of the provinces and oblasts, and they continued to be issued until 1917. In the post-reform period (after 1861), the *Gubernskie vedomosti* broadened their coverage to some extent, having received permission to reprint political news and articles from central publications. The unofficial sections of the newspapers became far richer and more diversified in content. The official provincial newspapers published ordinances, which in some cases contained material on government policy and its implementation and the history of the working of provincial and district institutions. In addition, during the period of their publication, the unofficial sections of these newspapers carried an enormous quantity of material on the history, ethnology, archaeology, and geology of various regions and oblasts of the Russian Empire.

*Fatherland Notes* (1818-1820, 1839-1884) contained in its early issues the first article on the history of technology in Russia - a life of the eighteenth century machinist and inventor, Kulibin - as well as a description of a Tula armaments plant. Later it included sections on
science, agriculture, and industry. See A.G. Dementev, A.V. Zapadov and M.S. Cherepakhov *Russkaia periodicheskaia pechat* (1702-1894). *Spravochik*, Moscow: 1959. Also, *Gorodskoe delo* (1909-1918), a journal which examined political and developmental issues in many Russian cities, is a very important source. Comparative data on budgetary expenditures, the type of material used in local housing, the number of physicians and hospitals and the like may be found for most Russian cities in *Goroda Rossii v 1904 godu* (1906) and *Goroda Rossii v 1910 godu* (1914), both compiled by the Central Statistical Committee of the Ministry of the Interior.

**Tula Histories**

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fond 102 opis 256 delo 10
fond 102 opis 194 delo 261
fond 124 opis 62 delo 33
fond 102 opis 48 delo 66
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fond 102, opis 194 delo 261
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Note: The archival references made in the text were copied directly from the documents. For this reason, the annotations, the order in which they are given, and the use of full words versus abbreviations vary. It was thought better to adhere to the form they appear in the documents rather than to systematise them. For example, god (year) usually precedes delo (file), but not always; god often appears as g.

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