

Labor Discipline, the Use of Work Time, and the Decline of the Soviet System, 1928–1991

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The issue of labor discipline lay at the very heart of the antagonistic relationship between the Soviet elite and its work force. That “discipline” was slack in Soviet factories has long been noted by Western and Soviet commentators alike: high labor turnover; absenteeism, closely tied to heavy drinking on and off the job; and, more importantly, a highly irregular pace of work, with periods of intensive labor (usually involving forced overtime) interspersed with countless opportunities for time wasting, slow work, and a general disregard for production quality. The historical genesis of this system of work is complex, and beyond the scope of this article, but one factor in particular deserves special stress. In order to consolidate its rule, the emerging Stalinist elite had to break down actual and potential opposition emanating from virtually the entire society: the peasants who resisted forced collectivization, and the industrial workers (largely drawn from that same peasantry), the majority of whom resented and to a certain extent resisted the hardships and pressures of industrialization. This required an atomization of the population, in particular the working class—not perhaps a total destruction of mutual solidarity, but the elimination of its ability to function collectively as a class, and the erosion of its consciousness of itself as a class. At the same time, the bureaucratic, almost cavalier planlessness of the Five Year Plans created a deep labor shortage. For the regime this was to prove a fatal combination: a depoliticized, but alienated and bitter work force which, because labor power was desperately scarce, could neither be induced nor compelled to work efficiently.

The result was that workers became a central—but by no means exclusive—cause of the long-term trend toward chronic inefficiency and economic decline which plagued the Soviet system. Workers, while politically powerless to alter the system, compromised the elite’s ability to extract and dispose of the surplus product. They thereby became a prime cause of its instability. Virtually every phase of Soviet history therefore witnessed a concerted struggle by the elite to find ways to improve labor performance. Under Stalin, the emphasis was on naked coercion; to the extent that such measures proved unsuccessful, the economic losses this entailed were compensated by the existence of a massive slave-labor sector. The failure of the Stalinist strategy produced two major periods of attempted reform, under Khrushchev and Gorbachev, which sought to solve the problems of poor motivation and effort by combining the incentives of political liberalization with the economic sanctions of tighter wage policies

and, under Gorbachev, the threat of unemployment. As we now know, these efforts also failed to produce the desired results because the reforms could not go beyond the intrinsic limits of the system. No reform could challenge the basic power relations on which the elite's continued rule rested. Thus the fundamental antagonisms which destabilized production remained unresolved, and the system continued on its path of irreversible decline.¹

Labor Discipline and Labor Mobility

The Stalinist regime's concept of labor discipline reflected its repressive approach to the problems associated with attempting rapid industrialization with a work force increasingly drawn from a hostile peasantry possessing limited experience with the rigors of industrial employment. Violations of discipline came to include not just absenteeism, drinking on the job, or insubordination, but job changing. It is important to grasp the enormity of the social and political problems which the regime confronted during the First Five Year Plan (1928–1932). The deepening labor shortage coincided with a calamitous fall in the standard of living, so that workers, be they older, experienced workers or new recruits from the countryside, engaged in mass migrations in search of better pay, housing, rations, and working conditions.² There was a marked deterioration in discipline in the conventional sense at a time when the regime and industrial managers were attempting to impose an intense speedup by raising output quotas (known as "norms" in Russian) and cutting job prices. Strikes and street demonstrations were common, but were almost always spontaneous outbursts of anger and frustration at worsening working conditions and the dire scarcity of supplies.³ Insubordination, including physical attacks on managers and rate busters (so-called shock workers), was common.⁴

In the main, the regime gradually gained control over the situation through a process of attrition. Strikes and demonstrations met with violent repression, but even more important was the fact that the daily struggle for individual survival made the mere thought of collective opposition virtually impossible. If the regime was able to eliminate overt resistance to its policies, it was never able to exercise total control of the workplace. Collective responses became more and more difficult, and eventually impossible, but individual actions such as absenteeism and the waste of large amounts of work time proved more impervious to pressure from above. During a labor shortage the most effective weapon workers had at their disposal was simply to change jobs. Job changing became a violation of labor discipline, subject to increasingly harsh legal restrictions.

One of the great merits of Solomon Schwarz's early studies of Soviet labor was the clarity with which he chronicled the increasingly repressive use of the law to limit workers' freedom of action. His error, however, was to see this as an almost teleologically driven movement toward the imposi-

tion of compulsory labor. In fact, the regime, as in most other areas of social control, was constantly reacting to events, rather than initiating them. As absenteeism and turnover soared during the First Five Year Plan (1928–1932), it attempted to deal with the situation through relatively mild limitations on workers' movements.⁵ When these proved ineffective, it made the restrictions more punitive. When managers and workers showed themselves adept at circumventing the new laws, the regime made them harsher still, eventually criminalizing absenteeism and leaving one's job without permission in 1940.⁶

Through the evolution of labor law we can, therefore, trace the deepening antagonism between the elite and the work force. But these attempts to regulate labor mobility have another significance—they made labor law an object of informal bargaining between managers and workers. Where the interests of production dictated that managers protect workers from dismissal or prosecution they were prepared to do so, until such actions became dangerous to their own personal safety. Even during the war, workers defied the 1940 edict in large numbers, although their chances of facing prosecution were extremely high.⁷

This draconian legislation stayed on the books until April 1956, when it was repealed as part of de-Stalinization. However, the regime had recognized its declining utility even during Stalin's lifetime. The penalties were eased in 1951 and 1952; willful job changing during this time increased, while prosecutions became increasingly rare.⁸ This relaxation reflected the changing economic and political significance of labor mobility in the post-war era. In the first place, levels of turnover, although they rose considerably after the 1956 reforms, were only a fraction of the dizzying levels of the 1930s; about seventeen percent of the work force changed jobs each year.⁹ In the 1930s it had been a principal response by a work force traumatized by collectivization and by the crushing of organized resistance by peasants and workers alike. By the 1950s Soviet industry had a relatively stable work force, and the standard of living, although low, was by no means desperate. Second, the regime's perception of the problem also changed. The entire political project of de-Stalinization was predicated on the perception that any improvement in the country's economic performance would require an end to the profound popular demoralization which Stalin's rule had created. If under Stalin the regime had adopted an attitude of contempt and fear toward its own working population, so that changing one's job was branded as a criminal betrayal, under Khrushchev public attacks on workers virtually ceased. The aim now was to persuade workers that the regime now operated in their interest. Thus turnover was portrayed as a rational response to poor material conditions such as lack of housing, low wages, poor standards of health and safety, and abuse by overbearing managers. For this same reason the repeal of the Stalinist labor laws was accompanied by stronger protection of workers against unfair dismissal.

This was not merely a question of political rhetoric and propaganda.

The nature of the phenomenon indeed had changed. It was not so much a universal problem as one which plagued key sectors, and in this way threatened to undermine the leadership's strategy for economic development. This was most clearly manifested in two key areas: the attempt to industrialize Siberia and the Far East, and the loss of machine tool operators in the machine building industry. The root causes were different in each case. In Siberia the lack of infrastructure, including basic housing and paved roads, made it almost impossible to retain the hundreds of thousands of recruits who came from European Russia, and thereby to develop a stable work force. In engineering, the Khrushchev wage reform of 1956–1962 put so much pressure on the earnings of machine tool operators that there was a mass exodus out of the profession, causing dangerous bottlenecks in what was perhaps the economy's most vital industry.¹⁰

Khrushchev's handling of labor mobility had more far-reaching consequences than these conjunctural crises would suggest. For in repealing the Stalin labor laws and strengthening protection against dismissal, he once again created a labor market where, thanks to the labor shortage, workers could change jobs at will while enjoying security of employment if they chose to stay. Managers were thus faced with the problem of how to deter workers from quitting, and thus labor mobility became an object of informal bargaining in a way it had not been since 1941. The issue acquired added economic importance as the terror and the labor camps were eliminated, since accumulation would henceforth have to take place entirely within the "free" sector of the economy. The economy became even more vulnerable to the vagaries of worker–management relations. This in turn created a definite cycle of reproduction of the Soviet Union's chronic labor shortage. Workers could use their relative scarcity to extract a limited, but palpable, degree of control over how they executed their labor. This control became a source of the myriad dysfunctions and disruptions which plagued production and distribution: shortages of supplies and parts, frequent breakdowns of equipment, incomplete batches of production and the delivery of unfinished machinery, and the production of defective and substandard goods and services. Taken as a whole all of these difficulties placed renewed pressure on managers to hoard labor: first, because the inefficiencies of Soviet production caused it to consume more labor power per unit of output, and second, because the irregularities of production schedules meant that managers had to retain a permanent surplus of hands to help meet targets during rush periods. Thus labor was always in short supply, once again allowing workers to exert partial control over the labor process and setting the entire cycle in motion in the next production period.

Recognition of the impasse into which this cycle had led the Soviet economy was fundamental to the thinking behind the economic reforms of *perestroika*. The creation of labor mobility and an unfettered labor market were seen as central to any attempt to restructure labor–management

relations. There were, in fact, two distinct strategies among reformers concerning unemployment. According to the dominant strategy shaping labor policy, workers were to be let go as a result of technical modernization and a general streamlining of production, enforced in turn by the need for enterprises to show a profit under the new conditions of financial management. Redundant workers would, however, be reemployed almost entirely in other areas of the economy. In this scenario work-force reductions would not lead to long-term unemployment, but would merely release unproductively employed workers for the expanded production of use values or the provision of services. This was certainly the official position of the State Committee on Labor and Social Questions, Goskomtrud.¹¹ The other strategy, championed by the more strident of the marketeers, saw redundancies leading to genuine unemployment, which was to act as a disciplining vehicle and a means of coercing workers into surrendering shop-floor prerogatives, similar to the strategy pursued by the Conservative government in Britain after 1979.¹²

Actual events followed neither path. Initial redundancies were far below anticipated levels, and affected primarily specialists and white-collar employees. Where industrial workers were let go, most were redeployed within the same enterprise, and many did not even know that they had been made "redundant."¹³ However, even this slow trickle of layoffs came to a halt, and by 1990 there was a chronic shortage of industrial workers. Two factors contributed to this development. First, the legalization of small-scale private cooperatives siphoned off appreciable numbers of skilled and unskilled workers because better pay was offered and, frequently, also better working conditions. This trend was reinforced by a relatively small but nonetheless discernable movement of women out of industrial production. As a result, throughout 1990 and 1991 factories did not have enough workers in key sections to avoid production bottlenecks. Second, the shifting of enterprises to so-called self-financing, which made them responsible for meeting an increasing proportion of investment and running costs (including wages) out of revenue, did not create the expected incentive to invest in labor-saving equipment. In part this was because of the poor reliability of Soviet machinery, which made managers wary of sinking large sums into equipment which would produce few or no productivity gains. The main reason, however, lay in the market mechanisms themselves. In an economy beset by shortages and dominated by large, oligopolistic producers, enterprises found that the best way to maximize revenue was not to invest and re-equip, but to cut output and raise prices. As the labor shortage worsened, enterprises faced further financial pressures, since they had to divert funds to meet higher wage demands in order to deter workers from quitting.¹⁴

The result was that by the end of *perestroika* there was still virtually no unemployment among industrial workers. In light industry and textiles several hundred thousand women had been put on short-time work or

temporary unpaid leave during 1990 and 1991, but this was due to shortages of raw materials resulting from market-induced breakdowns in delivery contracts, not the product of planned modernization and redundancies.¹⁵ At the end of 1991 textile factories were still recruiting workers.¹⁶ Where layoffs did occur they affected not workers, but precisely those personnel whom the regime had wished to retain: skilled engineering and technical specialists.¹⁷ Thus labor mobility under *perestroika* exhibited the same unplanned, spontaneous characteristics as it had during the rest of Soviet history. The threat of unemployment failed to exert any disciplining effect on shop floor relations; on the contrary, the conjunctural exacerbation of the structural labor shortage undermined the whole policy of industrial reconstruction which lay at the heart of the Gorbachev's larger political strategy of preserving the elite's dominance and privileges through economic renewal.

Control Over Work Time

The use of work time in the Soviet Union during Stalinist industrialization would seem to fit the classical pattern of other industrializing societies. As already indicated, turnover and absenteeism were high. Discipline within the work routine was lax, and workers squandered enormous amounts of time wandering around workshops chatting with workmates, going off for a smoke, leaving early for dinner break, or knocking off early to go home. Production shops, it was said, were "being turned into boulevards and courtyards."¹⁸ However, there were important differences with Western societies as well. Although the bulk of the work force was recruited from a peasantry undergoing massive forced displacement (and thus bringing with it deep resentments against the regime), there was already a core of older workers who were not artisans, but part of a working class formed during an earlier phase of tsarist industrialization, during a successful proletarian revolution, and during the market conditions of the New Economic Policy. High turnover and absenteeism, together with extremely lax attitudes toward the use of work time, had long been part of their work culture.¹⁹ More significantly, prior to the 1930s many of these workers had enjoyed a large degree of control over the intensity and organization of their work. In industries like engineering and textiles, skilled (primarily male) operatives determined their own organization and sequence of jobs, and carried out, either on their own or through work teams which they themselves hired (in textiles, largely their families and relatives), all operations which made up a production process, including the maintenance and modification of machinery. Such customary practices had helped them to resist attempts to impose Taylorism and "scientific" output norms in Soviet industry during the 1920s. What we see, then, is that the new workers coming from the countryside were not entering a void, but going into factories and construc-

tion sites where workers were already accustomed to considerable independence.²⁰

Not surprisingly, these traditions were inimical to the hypercentralized, authoritarian methods of control applied by the Stalinist elite. Work processes became extremely individualized and specialized. What had been integrated production processes were now broken down into innumerable minute jobs, with each worker carrying out only one specific operation. Labor economists justified this policy on the grounds that the millions of inexperienced peasants now working in industry could not master more complex operations.²¹ Far more important, however, were the political functions which such a policy served. First, it removed workers from any control over the conception of tasks, the latter becoming the exclusive province of management. Second, it was, together with the extreme individualization of wages and the application of piece rates, a primary vehicle for atomizing the work force and neutralizing potential resistance to central state authority. Both work organization and incentives pushed workers to relate solely to their own narrow task within production, rather than to production as a whole. This had political benefits for the regime, insofar as it undermined solidarity between workers, but only at great economic cost. Workers were driven to overshoot their personal production targets, regardless of the need for coordination between different phases of an item's manufacture. If some workers were faster or more productive than others, this did not lead to a commensurate rise in the aggregate production of use values; it merely led to stockpiles of surplus parts which could not be assembled into finished units. Within factories this same logic applied: Shop managers, in their attempts to surpass their individual plans, concentrated on those parts or products most easy to produce, ignoring more costly or complex items which might, however, be equally essential to final assembly.²²

This hyperindividualization of work created innumerable opportunities through which workers could appropriate large portions of the working day as their own. Here it becomes almost impossible to separate the deliberate violations of discipline cited above from forced losses imposed by the bureaucratic system. Workers might lose several hours in a shift looking for missing parts or tools, switching to different jobs because of changes in plan priorities, waiting for advice from a foreman, or waiting for a tool setter to reset or adjust a lathe. The practice of extending lunch breaks was often necessitated by the need to go early in order to beat the long queues—themselves caused by the inability of factory dining rooms to accommodate the full number of workers in a shop or section. Similarly, workers might leave a shift early because public transport was not coordinated with factory shift times and they would have no other way to get home. By the same token it is clear that workers could use these objective circumstances as pretexts for stealing time for themselves.²³

We should state at the outset of this discussion that disruptions to

production and ensuing losses of work time did not necessarily mean a reduction in the intensity of labor. In the first place, slack periods, especially those caused by lack of supplies, had to be made up by massive overtime, including working on off-days and the legendary "storming," when a shop or enterprise would have to produce the bulk of its monthly or quarterly plan at the end of the relevant period. Second, stoppages did not necessarily reduce the strains of work. Soviet workers themselves will say that it is frequently far less fatiguing to work with a regular rhythm, even if at a fast pace, than in an erratic stop-start pattern. Workers also found it quite frustrating to have to scour the factory for missing tools or parts, to take time out to rectify defects in components or finished output, to decipher and modify incorrectly drawn plans, or to adapt processes because the materials (metal ingots, for example) were too hard, too large, or otherwise of the wrong specifications. Third, stoppages could seriously eat into earnings, although workers very often were able to negotiate with shop management to have such losses made good.

Nevertheless, there is no question that substantial amounts of production were lost because workers were able deliberately to reduce the intensity of labor. During the first decade of Stalinist industrialization the regime tried no end of methods and campaigns to break down this control. In 1928 and 1929 it introduced the system of continuous production, with factories supposed to work around the clock on three seven-hour or four six-hour shifts. The system was abandoned due to excess wear on equipment and the discontent caused by the fact that families no longer had common days off.²⁴ In the 1930s the regime became obsessed with time-and-motion studies—so-called "photographs" of the working day—which were used primarily to identify areas where work time was slack so as to justify the imposition of tighter norms. The apex of this policy, of course, was the Stakhanov movement, which used drastic norm increases and cuts in job prices to compel workers to intensify their use of working time in order to preserve their previous earnings.²⁵ In the end, it must be said that these various campaigns failed to have a great deal of impact on the way that production was organized and carried out. On the contrary, what we see by the late 1930s is that the work practices of the early 1930s had become part of custom, prerogatives which workers would not lightly surrender. Workers continued to waste inordinate amounts of time, sometimes deliberately, sometimes due to the general state of disorganization within industry. Because of the labor shortage and the absence of any sanction of unemployment, managers were powerless to break these patterns of behavior. It is true that these practices were largely suppressed during the war, but they reemerged as an immutable part of the system of industrial organization from Khrushchev onward.

This leads us to another fundamental difference between Stalinist industrialization and industrialization in Western Europe and the United States. If these latter countries were eventually to instill a culture of pro-

duction appropriate to the needs of modern capitalism, this process was much more incomplete in the Soviet Union. If we look at the evidence from the 1930s in isolation, we could very plausibly infer that what we see is not a specifically Soviet culture of production, but the behavior of a peasant work force in the early stages of its accommodation to industrial life. The same could be argued about the lax use of work time in the 1920s, since even skilled workers were only one or two generations away from the village, and most workers still had strong ties to the countryside and its culture. If we take a longer view, however, this argument must be questioned. By the 1950s and 1960s these were not peasant workers, but an urbanized work force. By the 1970s and 1980s it was a working class whose members had been employed in industry for two or more generations. There is, then, another explanation, namely, that the particular conditions of Stalinist industrialization gave rise to the poor use of work time as a phenomenon specific to this particular system. Its origins lay in a combination of conjunctural factors: the hostility which workers and ex-peasants felt toward the regime, their importation into industrial life of preexisting habits and attitudes toward work, their political atomization, the labor shortage, the dislocations caused by the bureaucratic methods of industrialization, and the breakneck speed at which it was imposed. All of these when taken in concert gave workers significant opportunities—and in many cases actually compelled them—to assert individual control over the labor process. However, once established, these work practices became part of the basic fabric of how production was carried out. Far from disappearing as the system matured, they were constantly reproduced by that system.

We see this clearly in the post-Stalin period, by which time we can identify a quite distinct morphology of lost work time and an equally distinct pattern of its reproduction. During the Khrushchev period, for example, the average industrial worker was idle approximately thirteen to fourteen percent of shift time. This was the equivalent of losing between thirty and thirty-three days of work in a year without ever leaving the factory. Authorized absences, including maternity and sick leave (but *excluding* paid public holidays), together with the relatively small number of days lost to truancy, amounted to another twenty-six or twenty-seven days.²⁶ A quarter-century later, in the late 1980s, the figures were very much the same: Stoppages and enforced idleness cost the average worker from ten to twenty percent of each seven-hour shift—equivalent to between twenty-three and forty-six days a year.²⁷ Moreover, the causes of the stoppages remained equally constant. There were, of course, the deliberate actions of the workers themselves: dawdling at the start of a shift, leaving early for meal breaks, or abandoning work before the end of a shift. As in the 1930s, such actions were not always capricious. Adherence to official work schedules could mean finding no food in the factory canteen or missing the last bus home.²⁸ The chronic shortage of consumer

goods and services and the failures of the distribution network also took their toll. Compare this 1933 report:

In a production shop of one Moscow factory kiosks with books and newspapers have been set up on either side of the entrance doors. Right in the shop is a railway ticket counter, around which there is an eternal crush. Tens of workers are missing work time. In the heart of the shops are a cafe and snack bars. Certain people, so as better to serve the workers, set up a theater ticket counter right on the spot. It is not surprising that at this factory the actual work day does not exceed five and a half hours, and for individual workers is much less.²⁹

and this account of Moscow's Elektroavod factory in 1937:

Throughout the day an unending flow of people spills along the factory corridors, through the shops, along the stairwells. This is the best index of both the level of discipline and the organization of production. In the corridor of Elektroavod they trade books and sell ice cream. Sometimes it's a factory, sometimes it's a department store.³⁰

with this description by a shop superintendent at the Voskresensk fertilizer factory in 1991:

Perhaps I cannot give you an exact figure, but right now at our work, for example, at least 10–15 per cent of work time is spent each month [on shopping]. We have barter deals through which we receive produce and various commodities. And the distribution between people takes place here, directly at the enterprise, not in the stores, and diverts 15 per cent of work time. That is, people aren't working, but running to get a slab of meat, a jacket, a television, or canned goods.³¹

However, the main causes continued to lie within production itself. One problem was the chronic undermechanization of production. Soviet industry was always characterized by a large degree of manual labor. A substantial minority of such workers (some eleven percent in 1965 and fourteen percent in 1987) were skilled workers in repair and maintenance, but a far larger share (about half in the mid-1960s, and thirty-five percent in 1985) were low-skilled workers carrying out their jobs without the aid of basic labor-saving equipment. This predominance of manual labor went hand in hand with the overblown auxiliary sector of the industrial work force (warehousing and transport, quality control, factory cleaners, packers, storeroom attendants, as well as repair and maintenance personnel), which accounted for half of all workers from the late 1950s to the mid-1980s.³² The persistence of such a large pool of manual labor had a profound impact on working conditions in Soviet industry, which were truly appalling—but

this is not the aspect of the problem which concerns us here.³³ It affected the organization and execution of production in two fundamental ways.³⁴ First, auxiliary operations were in the main unmechanized. This created incessant bottlenecks for production workers, who had to wait for parts and components to be delivered, for workplaces to be cleaned up, or for machine tools to be adjusted and set. The issue here was not simply that the lack of mechanization slowed down such operations: It was that because these procedures were performed manually, workers could exercise greater control over the pace of their work. Where this involved skilled workers, for example, maintenance fitters or workers making replacement parts in factory machine shops, production shops would be dependent on the willingness of such workers to give their needs high priority, and would have to bargain with them to do so.³⁵ Second, *within* mechanized jobs there was a great deal of time-consuming manual labor. Machine tool operators, for example, had to shift and mount onto their machinery parts and semifinished components that could weigh anywhere from several hundred to several thousand pounds, yet Soviet industry did not produce the hydraulic, pneumatic, or electrical devices needed to speed up these operations.

The causes behind this chronic undermechanization were varied and complex, and we can summarize only the most prominent of them here. The Stalinist planning system's priority on plan fulfillment caused managers to concentrate investment on direct production, ignoring auxiliary operations, which remained unmechanized. To this must be added the well-described aversion of Soviet managers to innovation: New processes and technology might lead to lower output during settling-in periods, jeopardizing plan-fulfillment figures; if successful, it would require changes in production methods and redeployments of workers which might well meet with workers' resistance. A further disincentive was the intrinsic unreliability of Soviet equipment, which was outmoded in design, often unsafe to use, and, at least by the time of *perestroika*, becoming increasingly expensive while offering only modest (if any) improvements in actual productivity.³⁶ Finally, the cheapness of Soviet labor power, especially that of women workers who dominated many, if not most, auxiliary operations (in particular those involving heavy manual labor), gave managers an added incentive not to mechanize. It was cheaper to hire extra workers, even if they had to pay them "danger money" for working in arduous and hazardous conditions. Workers themselves were complicit in the perpetuation of these arrangements, since they were reluctant to see improvements in conditions if they came at the expense of such privileges as higher wages, early retirement, or better food supplies. This was especially true of women, who often depended on wage supplements for hazardous work to augment their otherwise-meager pay. But the corrupting influence of this wage bargain affected all workers. Unable to contemplate collective action to force

improvements in conditions, they opted for the individual solution of higher wages or early retirement in exchange for their agreement to carry out strenuous and unsafe jobs.

The other major obstacle to the smooth operation of production was the near-impossibility of coordinating the work of interdependent sections and shops. Assembly-line production was especially vulnerable. Lines might be idled for hours, days, or even weeks at a time because of shortages of components, mostly coming from other sections of the same factory. It was typical that the sources of the disruptions were never constant, but varied from one day to the next. Thus management could neither anticipate the source of the problem in advance, nor solve it by concentrating attention and resources on one particular bottleneck section. An insight into the complex interaction of factors causing production losses can be gained by looking at Moscow's AZLK automobile factory, which made the Moskvich car.³⁷ The factory's main conveyors suffered protracted stoppages virtually every day. One day there might be no gearboxes; on another, no gas tanks; on still another, no grease. Each of these shortages, of course, arose from other shortages in the shops responsible for manufacturing them: no flanges or metal for the gearboxes, no plastic for the gas tanks, no spare parts for foreign-made equipment. Negligence also took its toll. Machinists neglected to clean equipment, tool setters set the assembly line incorrectly, parts rusted because no one had filled the machines which cleaned them with cleaning solution. Raw materials spoiled not just because the factory lacked adequate storage facilities, causing them to be left out in the open air, but because of constant mishandling by loading and transport workers. In still other cases parts were missing because workers stole them. Another cause of holdups was the above-mentioned ability of certain key workers—primarily those in machine shops making spare parts and maintenance fitters responsible for repairing equipment—to decide which jobs they would do and in what order. If there were disputes over the rate at which certain parts would be paid, they simply refused to make them until they had completed jobs that were more profitable.

Particular mention should be made of the role of repair and maintenance here. Enormous amounts of labor time were lost to the rectification of defective production. At AZLK, for example (and the factory was by no means unique in this regard), the production line for gearboxes employed a special fitter who did nothing but remove faulty components from the conveyor and rectify the defects.³⁸ Sometimes, however, as at Leningrad's Kirov works, defects were not discovered until after final assembly: In this particular case hydraulic systems had to be stripped out of finished tractors, remade, and reinstalled.³⁹ In still other cases the defects were so serious that they could not be rectified, and the entire production process had to be repeated. Equally time consuming were the breakdown and repair of equipment. The repair and maintenance sector within Soviet industry was enormous. The number of fitters, electricians, and other re-

pair workers grew constantly, and because machinery manufacturers routinely did not make spare parts for their equipment, individual shops and sections had to construct and maintain their own small machine shops in order to make the parts themselves, something they could do only at great cost and with extremely poor quality. This, however, was not the only source of the problem. The poor quality of machine manufacture, the reluctance of managers to take equipment out of service for preventive maintenance (so as not jeopardize plan fulfillment), abuse and negligent handling of equipment by workers, and the poor work of the repair workers themselves all led to a high rate of breakdown.⁴⁰ This panoply of causes made the location and rate of breakdown almost totally unpredictable, thus further undermining any attempts to achieve rational coordination within production.

The Limits of Informal Bargaining

In all industrial societies that have existed up to now, the formal system of industrial relations is supported by a network of informal arrangements among workers, and between workers and line management, without which production could not be kept going even in the most efficient factory. These arrangements involve tacit understandings over earnings, discipline, the organization of work, and the effort required, each of which sets the limits within which management can apply formal work rules and within which workers can bend or circumvent them. At the *phenomenal level* the informal bargaining—the so-called effort bargain—which we observe in Soviet industry appears similar to what takes place under capitalism.⁴¹ However, the *internal drives* which produced these arrangements were quite specific to Soviet production.

At the core of such bargaining lie informal arrangements over earnings. This was even more true in the Soviet Union, where there was no collective bargaining, and where wage rates and output quotas were determined by the state and enforced by enterprise managers. If workers deemed their earnings unfair or inadequate they could not protest or strike; they had to employ other means like quitting or seeking an understanding with foremen or section heads. Some of the methods they used did not differ radically from what we observe in capitalist factories: restricting output to avoid rate cuts or norm rises; concealing some of one month's output in order to claim payment for it sometime in the future; or sharing out profitable and unprofitable jobs within a work team in order to equalize earnings. Where political conditions permitted, and if workers were in a strong enough bargaining position, they could refuse to work on certain parts they deemed unprofitable.⁴² In the main, however, the specific political and economic conditions of the Soviet system forced the contours of informal bargaining along other channels.

In the 1930s the Stalinist regime used wages and incentives as a cudgel. Norms were repeatedly raised and job prices lowered so that workers would have to produce significantly more merely to keep earnings stable. Shock workers, and later Stakhanovites, were encouraged—and assisted—to set new production records, and their achievements were then used as the standard for adjusting norms and rates for everybody. Wage problems were, however, complicated by the fact that dire scarcity led to a partial demonetarization of remuneration. From 1928 to 1934 most basic goods were rationed, although even then many were generally unavailable. Stocks at state shops were also meager, forcing workers to go the peasant markets, where free market prices prevailed—which the workers simply could not afford. The enterprise became increasingly important in providing workers with basic needs: housing, scarce foods and consumer goods, passes to rest homes, places in pioneer camps for their children, basic medical care, childcare facilities, and (administered through the trade unions) pensions and sickness benefits. Workers thus became dependent on the enterprise for a large part of their welfare. Concretely, this meant dependence on their immediate superiors, who had the power to disburse or withhold cherished goods and privileges. Even when rationing ended, wages were never again fully monetarized, and workers continued to rely on their place of work to maintain some semblance of a decent standard of living.

Norm-setting was not simply a question of regulating earnings, however. It was also about the use of work time. From the 1930s until the fall of the Soviet Union the central planning authorities fought a running battle with local management over the application of so-called scientific norms. Most norms were “empirically based,” which meant they were calculated allowing for “normal” stoppages, that is, on the basis of the workday as it was actually used. The regime, on the other hand, constantly pressed for norms to be based on the potential of the equipment if production were to run smoothly and without bottlenecks. In short, tighter norms were to be a vehicle for imposing a more disciplined and more intensive work regime.

The real battle was between the regime and the work force. Management was in many ways an intermediary, caught between conflicting pressures. Managers were not capitalists and derived no direct benefit from pushing down earnings in the form of profits. Their aim was to surpass their production goals, and under Soviet conditions speedup was not always the most expeditious way to achieve this. Even in the 1930s, including during the Stakhanov period, managers acted to protect the earnings of rank-and-file workers in the interests of preserving social and political harmony within the plant. The most direct way was to retard the implementation of the periodic norm rises decreed on an almost annual basis by the center. Managers might surreptitiously disregard them; they might raise them temporarily and then set about lowering them on various pretexts; they might neglect to adjust norms upward when technological improvements cut the

time on various operations. Where this failed, shop management could make various adjustments to wages by allowing workers to falsify their production figures, by awarding them bonuses for work they had not in fact done or for carrying out work that was already part of their normal job description, or by rotating them periodically into jobs with easier norms so that they could push up earnings. The cumulative effect of all these devices was that by the end of the 1930s norms in most industries were being substantially surpassed, and payments for such excess had come to represent a large—in some cases the majority—share of monthly earnings.⁴³

The wage reforms of both Khrushchev and Gorbachev were attempts to reverse this situation and to use incentive policies to break down the partial control which workers exercised over job execution.⁴⁴ It is noteworthy that the provisions of the two reforms were almost identical. Both sought to impose an intensification of the working day through the greater use “scientific-technical” norms. This pursuit proved just as chimerical under the reforms of Khrushchev and Gorbachev as in Stalin’s day. By the 1950s there had evolved a definite notion of what customary earnings should be in each trade within an enterprise. Managers proved reluctant to jeopardize the shop-floor understandings with workers which challenging such customs would have entailed. In theory such an assault on established practice might have been possible within a more predictable working environment and if unemployment had loomed as an effective sanction. Reality, however, dictated that there were too many factors over which workers—and the managers themselves—had no control and which could seriously cut into earnings, thus dictating that earnings had to be protected. This same dilemma undermined attempts to tie earnings to the fulfillment of various quality criteria. Workers simply could not earn the quality bonuses, even if they themselves were not directly responsible for failure to meet the new standards.

Under Khrushchev the one industry which did rigidly apply the reform—machine building—soon found itself confronted by a labor crisis, as machine tool operators gave up their jobs en masse in search of work where they had greater control over their own labor process. Under Gorbachev the crisis generated was even greater. The creation of a state quality-control agency (Gospriemka) and its rigid monitoring of quality led to such widespread discontent that the policy was rescinded.⁴⁵ At the same time the worsening labor shortage, and enterprises’ continual need to inflate wages to deter workers from quitting, led the government to repeal the reform and totally devolve wage and norm-setting to individual enterprises at the end of 1990, thus creating in effect a wages free-for-all.⁴⁶

The problems of bargaining over earnings and effort throw a clear light on the nature of the Soviet system. Workers could not negotiate collectively, but only as individuals or as small groups (for instance, as a work team, or on occasion even as a whole section). As a result, the bargaining took the form not of a contest of strength but of an exchange of

favors which placed both parties in a position of mutual dependency. However, the balance of power here was not equal. Managers might have to make concessions in order to minimize disruptions to production which the loss of key workers or their uncooperativeness might cause, but they nonetheless knew that there were limits, at least until *perestroika*, beyond which workers could not go. Moreover, the power of workers was highly uneven from one group to another. Skilled workers, or even semiskilled workers with considerable experience and knowledge of production routines, could extract concessions which the less skilled, the less experienced, or those in less vital trades could not. This was most obvious in the case of women workers, who worked in industries and occupations where they had far less bargaining power with management than did men, and who therefore occupied the worst-paid jobs in the worst conditions.⁴⁷ This was also generally true of the system as a whole.⁴⁸ In addition, management controlled the distribution of vital goods and services, ranging from housing to scarce foodstuffs and consumer goods, to passes to rest homes and disability benefits (the latter two both administered by the trade unions). In a shortage economy this gave management enormous leverage, and created a strong strain of paternalism which helped reinforce workers' political passivity, even during *perestroika*.

Conclusion

Stalinist industrialization had given rise to a specific labor relationship in which workers were rendered unable to confront the ruling elite or even industrial management as a collective entity in their pursuit of either economic or larger political goals. The bureaucratic and planless nature of the system, however, with its absence of systematic economic regulation, allowed workers to assert negative sanctions directly at the point of production. This was not "resistance," but individualized defensive action by an essentially atomized and depoliticized work force. Workers became a source of the system's long-term tendency toward economic decline, a fact explicitly recognized by both Khrushchev and Gorbachev when providing the rationale for their respective reform programs. Unless workers could be made once again to identify with the system and emerge from their demoralization, no moves toward greater economic efficiency would be possible. Insofar as the elite's privileges depended on such an economic rationalization, its own existence was therefore placed in jeopardy. It is for this reason that the Stalinist system could not be termed a "mode of production." It operated at such a high level of internal contradiction and instability that it could never be more than a historically transient social formation. Effectively, the political relationships which kept the elite in power produced a network of social relations within production which led to the system's ultimate decline. This is significant. The system deteriorated but it was not overthrown. Stalinism's legacy was to make the recon-

stitution of the Soviet working class *as a class* (able to articulate and pursue its own radical needs) a lengthy and very difficult process. Some rudimentary beginnings were observable during *perestroika*, but they will take a long time to mature, perhaps several generations. In the meantime, the prospects for post-Soviet capitalism are for a stagnant, corruption-driven system, with no dynamic for development. If the alternatives are not quite socialism or barbarism, perhaps they are, at the very best, socialism or chaos.

NOTES

1. There is now a substantial literature on Soviet workers in the Stalin and post-Stalin periods. References can be found in the author's studies of Soviet production relations: Donald Filtzer, *Soviet Workers and Stalinist Industrialization: The Formation of Modern Soviet Production Relations, 1928–1941* (London, 1986); Filtzer, *Soviet Workers and De-Stalinization: The Consolidation of the Modern System of Soviet Production Relations, 1953–1964* (Cambridge, 1992); Filtzer, *Soviet Workers and the Collapse of Perestroika: The Soviet Labour Process and Gorbachev's Reforms, 1985–1991* (Cambridge, 1994).

2. Sheila Fitzpatrick, "The Great Departure: Rural-Urban Migration in the Soviet Union, 1929–33," in *Social Dimensions of Soviet Industrialization*, eds. William G. Rosenberg and Lewis H. Siegelbaum (Bloomington, 1993), 15–40; Stephen Kotkin, "Peopling Magnitostroi: The Politics of Demography," in *Social Dimensions*, eds. Rosenberg and Siegelbaum, 63–104; Filtzer, *Soviet Workers and Stalinist Industrialization*, chap. 2.

3. Sarah Davies, "Worker Dissent in Leningrad, 1934–1941," unpublished discussion paper, Centre for Russian and East European Studies, Soviet Industrialization Project Seminar, University of Birmingham, October 1994; Filtzer, *Soviet Workers and Stalinist Industrialization*, 81–87.

4. *Trud*, February 23, February 24, 1929; November 18, 1930; June 18, June 25, July 2, 1931; January 4, January 5, 1933; *Severnyi rabochii* (Yaroslavl'), March 9, September 3, 1929; March 23, 1930; *Proletarii* (Khar'kov), January 8, 1930.

5. In 1930–1931 the average worker was changing jobs every seven or eight months; in coal mining and construction the average sojourn was four to six months. By 1936 the situation had "stabilized," to one job change every fourteen months for industry as a whole, and every ten to twelve months in coal. In construction, turnover remained high throughout the decade, at an average of two job changes per year. Filtzer, *Soviet Workers and Stalinist Industrialization*, 52–53; taken from *Trud v SSSR* (Moscow, 1936), and *Plan*, No. 9, 1937, 21–122 (Ya. Kats).

6. The ascending severity of the labor legislation can be summarized as follows. October 20, 1930: Enterprises banned from hiring workers who had quit their previous place of employment (Central Committee Resolution, *Pravda*, October 22, 1930). November 15, 1932: Workers guilty of absenteeism to be automatically dismissed, evicted from enterprise housing, and deprived of ration cards (government decree, *Trud*, November 16, 1932). December 28, 1938: November 1932 penalties reaffirmed; absenteeism defined as lateness of more than twenty minutes (government, party, and trade-union joint decree, *Pravda*, December 29, 1938). June 26, 1940: Absenteeism and unauthorized quitting made criminal offenses (Edict of Supreme Soviet, *Izvestiya*, June 27, 1940). For a detailed discussion of the evolution of labor law and workers' and managers' responses, see Filtzer, *Soviet Workers and Stalinist Industrialization*, 107–15 and chap. 9.

7. According to John Barber and Mark Harrison, an average of one million workers were prosecuted each year for absenteeism, and a further 200,000 for unlawful quitting. Many others were able to avoid prosecution by fleeing—prompting the regime to declare an amnesty for them in 1944. John Barber and Mark Harrison, *The Soviet Home Front, 1941–1945: A Social and Economic History of the USSR in World War II* (London, 1991), 164.

8. Filtzer, *Soviet Workers and De-Stalinization*, 37, 249.

9. *Rabochii klass SSSR (1951–11965 g.g.)* (Moscow, 1969), 130.

10. Filtzer, *Soviet Workers and De-Stalinization*, 66–70, 75–89.

11. See, for example, the press conference held by V. I. Shcherbakov, head of Goskomtrud, reported in *Izvestiya*, February 5, 1991. Shcherbakov put this argument in more detail in *EKO* 1 (1990), 38, and *Sotsialisticheskii trud* 1 (1991), 10. This did not keep him from describing unemployment as "an inevitable evil under market conditions"; *Ekonomika i zhizn'* 15 (1990), 12.

12. "Until recently a job [*rabochee mesto*] had little prestige in our country. Many people, knowing that they could always find work in their trade, did not value their job or their duties. Even though these workers did not always work conscientiously, the administration turned its head the other way, excused their indiscipline with the sole desire to keep them from leaving the enterprise and leaving the work place bare. This, to be sure, is one of the reasons for the ineffectiveness of many of the measures designed to strengthen labor discipline. Now the situation is gradually changing. A place to work has gone up in price, since the enterprise now has an economic interest in cutting the number of cadre. When this interest becomes general, the worker will constantly face the choice: either work well and be necessary to production, so that the question of dismissal never comes up, or work badly and become a candidate for dismissal." *Sotsialisticheskii trud* 7 (1989), 74 (Yu. Orlovskii).

13. *Sotsiologicheskie issledovaniya* 1 (1989), 38–41 (I. E. Zaslavskii, M. V. Moskvina).

14. Filtzer, *Soviet Workers and the Collapse of Perestroika*, 46–53.

15. Filtzer, *Soviet Workers and the Collapse of Perestroika*, 139–41.

16. *Ekspress Ltd.*, November 28–December 4, 1991.

17. *Voprosy ekonomiki* 9 (1991), 35 (I. Zaslavskii); interview with officials of the Moscow Labor Exchange, October 9, 1991; *Rabochaya tribuna*, October 24 1991; *Vestnik statistiki* 6 (1992), 37–38.

18. *Voprosy profdvizheniya* 2/3 (1935), 35–36 (I. Shevelev). "In the majority of Leningrad factories work does not begin to get into full swing until 30 to 40 minutes after the horn. They end work, too, considerably before the horn. In July the Sovetskaya zvezda factory recorded 25 occasions where four brigades in full complement went to lunch every day a half hour before the bell. After the dinner break work at factories begins not immediately, but only after 30 or 40 minutes." L. Gutman, *Rabotat' pol'nykh sem' chasov* (Leningrad, 1933), 19. Another report from Leningrad's Lenin factory described the following: "Ivanov left without permission before work had finished; Grigor'ev followed Ivanov's example; Gretyukov came 10 minutes late twice in September; Piskunov, a fitter, goes walking around the shop during work hours. He does this on average 40 to 60 minutes a day. Pashkevich loves to stroll around the shop with 'his hands in his pockets.' This is putting it mildly: one of his strolls lasts 10 to 20 minutes." *Molot*, September 27, 1934; cited in *Voprosy profdvizheniya* 2/3 (1935), 69 (I. Reznikovskii).

19. We can illustrate the point with one of many accounts from the New Economic Policy period, this one taken from the Kolomna engineering works outside Moscow in 1924: "The factory's low productivity is occasioned in part by an insufficiently conscientious attitude from the factory's peasant element towards its work. Workers do not spend the whole day working, but waste a great deal of time smoking, discussing the peasant question, chatting about peasant matters; the rest of the time they work sluggishly, waiting for the horn at the end of work." *Pravda*, August 14, 1924; cited in A. Rabinovich, *Problema proizvoditel'nosti truda* (Moscow, 1925), 143. Rabinovich also cites another *Pravda* report, according to which workers routinely stopped work a half hour before the end of each shift to collect, read, and discuss the daily newspapers.

20. Rabinovich, *Problema proizvoditel'nosti truda*, 105–44, passim; Walter Süß, *Der Betrieb in der UdSSR. Stellung, Organisation und Management 1917–1932* (Frankfurt am Main, 1981), 189; B. Marsheva, A. Isaev, and E. Shteinbakh, *Zhenskii trud v mashinostroenii* (Moscow, 1933), 41–142; Chris Ward, *Russia's Cotton Workers and the New Economic Policy: Shop-Floor Culture and State Policy, 1921–1929* (Cambridge, 1990), chap. 4.

21. *Sotsialisticheskii trud* 6 (1959), 56–57 (E. Voronin).

22. This quite specifically Soviet phenomenon even earned a special name, *nekomplektnost'*. Literally, it means incomplete batching, and refers to the manufacture of a machine or other item whose final assembly cannot be completed for lack of a few often simple or inexpensive components. It was not a phenomenon peculiar to the Stalin period, but became a permanent feature of Soviet production. One of the machine shops servicing tractor production at Leningrad's Kirov works in 1991 had an excellent record of efficiency, but delays in other shops meant that the parts it produced simply had to be stockpiled; for some parts it had

accumulated a month's supply. As the factory newspaper remarked, its workers were producing simply for the warehouse. *Kirovets* (Kirov factory, Leningrad), February 14, 1991.

23. Filtzer, *Soviet Workers and Stalinist Industrialization*, 169–73.

24. Filtzer, *Soviet Workers and Stalinist Industrialization*, 73–74.

25. On Stakhanovism, see Lewis Siegelbaum, *Stakhanovism and the Politics of Productivity in the USSR, 1935–1941* (Cambridge, 1988); Robert Maier, *Die Stachanov-Bewegung 1935–38: Der Stachanovismus als tragendes und verschärfendes Moment der Stalinisierung der sowjetischen Gesellschaft* (Stuttgart, 1990); Gabor Rittersporn, "Heros du travail et commandants de la production," in *Le Soldat du Travail* (Paris: Recherche, 1978), 249–75; Francesco Benvenuti, *Fuoco sui sabotatori! Stachanovismo e organizzazione industriale in URSS, 1934–8* (Rome, 1988) (an English summary of this book is available as "Stakhanovism and Stalinism, 1934–8," CREES Discussion Papers, Soviet Industrialisation Project Series, no. 30, Centre for Russian and East European Studies, University of Birmingham [July 1989]); and Filtzer, *Soviet Workers and Stalinist Industrialization*, chap. 7.

26. Alastair McAuley and Ann Helgeson, "Soviet Labour Supply and Manpower Utilisation, 1960–2000," unpublished discussion paper (1978), 28a.

27. *Sotsialisticheskii trud* 7 (1991), 72 (A. Lopatin). These figures are based on time and motion studies carried out before the large rise in stoppages which hit most factories in 1990 and 1991 due to supply shortages.

28. Filtzer, *Soviet Workers and De-Stalinization*, 141–45; Filtzer, *Soviet Workers and the Collapse of Perestroika*, 182–83.

29. Gutman, *Rabotat' polnykh sem' chasov*, 20–21.

30. *Za industrializatsiyu*, August 2, 1937 (A. Khavin).

31. Interview with personnel from the Voskresensk fertilizer factory, July 9, 1991. According to other factory personnel, the stress created by this system led to constant fights over who would get what goods, with the losers sometimes storming out of work. By the same token, the workers were usually paid for the time lost off work during such shopping runs.

32. *Trud v SSSR* (Moscow, 1988), 63–65, 249–50; *Znamyia* 9 (1991), 211 (E. Starikov); I. A. Vaisman, "O sootnoshenii chislennosti osnovnykh i vspomogatel'nykh rabochikh v promyshlennosti," *Voprosy truda*, vypusk 1 (Moscow, 1958), 122; *Trudovye resursy SSSR (Problemy raspredeleniya i ispol'zovaniya)* (Moscow, 1961), 60; *Vestnik statistiki* 2 (1964), 30.

33. For a fuller discussion of the political economy of working conditions in Soviet industry, see Filtzer, *Soviet Workers and the Collapse of Perestroika*, chap. 5.

34. The discussion which follows is based on Filtzer, *Soviet Workers and De-Stalinization*, 148–56, and Filtzer, *Soviet Workers and Perestroika*, chaps. 5 and 6.

35. A metallurgical specialist in the Leningrad shipbuilding industry described how he expedited urgent orders: "I might go personally to the foreman, on the strength of the fact that I might have done him a prior favour or we had some common interest; or I might say to him that I would write an order for one ton of metal, that is, I needed one ton of metal smelted, but I would sign a form saying he'd done me two tons. Or, for example, before this, when he had given me defective metal I had always signed the form stating there were no defects and I had collected the metal—that is, I had done him a favour, allowing him to fulfill his plan." Where he needed help from workers with whom he did not have such personal ties he would bribe them with alcohol, a standard procedure throughout Soviet industry. Interview with A. K., metallurgical specialist, Leningrad, June 21, 1991.

36. This was not just true of auxiliary operations. The "modernization" of production jobs was held back by the notorious unreliability of Soviet robots and machine tools with programmed controls. The robots in particular were so expensive, yet added so little by way of increased output, that one study estimated that they would only pay for themselves in 500 years. When they went out of action, often for lack of spare parts, the workers whom they had displaced had to return to their old jobs. *Sotsialisticheskii trud* 5 (1990), 35 (N. Khrulev, L. Salomatina); I. Ya. Kats and V. V. Pavlychev, *Uskorenie nauchno-tehnicheskogo progressa v ob'edinenii: Opyt Ivanovskogo stankostroitel'nogo proizvodstvennogo ob'edineniya im. 50-letiya SSSR* (Moscow, 1989), 22; *Sovetskaya Rossiya*, June 1, 1988; *Za sovetськуyu malolitrzhku* (AZLK motor vehicle factory, Moscow), November 20 and December 27, 1989, July 9, 1990.

37. The factory's paper, *Za sovetськуyu malolitrzhku* (the title was changed in January 1991 to *Moskvich*) was quite exceptional in the range and depth of its coverage of production difficulties. The discussion which follows is based on a more detailed case study reconstructed

from the paper's accounts, which appears in Filtzer, *Soviet Workers and the Collapse of Perestroika*, 183–88, 190, 209.

38. *Za sovetskuyu malolitrazhku*, December 27, 1989.

39. *Kirovets*, July 4, 1990.

40. For a detailed analysis of the repair sector during the 1960s, but which applies equally to the Brezhnev and Gorbachev years, see Filtzer, *Soviet Workers and De-Stalinization*, 167–71. The accelerating growth in the number of repair personnel is documented in *Trud v SSSR* (Moscow, 1988), 63–65.

41. In addition to the historical and theoretical accounts provided by David Montgomery and Harry Braverman (not to mention the debates among socialists which Braverman's book provoked), see the participant-observation studies by Donald Roy, Tom Lupton, and Michael Burawoy: David Montgomery, *Workers' Control in America: Studies in the History of Work, Technology, and Labor Struggles* (Cambridge, 1979); Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York, 1974); Donald Roy, "Quota Restriction and Goldbricking in a Machine Shop," *American Journal of Sociology* 57 (March 1952): 427–42; Roy, "Work Satisfaction and Social Reward in Quota Achievement: An Analysis of Piece Work Incentive," *American Sociological Review* 18 (October 1953): 507–14; Roy, "Efficiency and the 'Fix': Informal Intergroup Relations in a Piecework Machine Shop," *American Journal of Sociology* 60 (November 1954): 255–66; Tom Lupton, *On the Shop Floor* (Oxford, 1963); Michael Burawoy, *Manufacturing Consent: Changes in the Labor Process Under Monopoly Capitalism* (Chicago, 1979); Burawoy, *The Politics of Production* (London, 1985).

42. *Sotsiologicheskii issledovaniya* 1 (1990), 19 (V. E. Gimpel'son, V. S. Magun); 2 (1990), 53–54 (V. D. Kozlov); 10 (1990), 8 (A. N. Komozin); 5 (1992), 23–32; *Sovetskie profsoyuzy* 7 (1991), 27 (A. Mitin); *Sotsialisticheskii trud* 6 (1989), 67 (V. Vikhornov, V. Vvedenskii); 10 (1990), 46 (V. Sekachev). Interview with worker at the Samara aviation factory, May 1993.

43. On norm setting in the 1930s see Lewis Siegelbaum, "Soviet Norm Determination in Theory and Practice, 1917–1941," *Soviet Studies* 36 (January 1984): 15–68; and Filtzer, *Soviet Workers and Stalinist Industrialization*, chap. 8.

44. What follows is drawn from Filtzer, *Soviet Workers and De-Stalinization*, chap. 4, and Filtzer, *Soviet Workers and the Collapse of Perestroika*, chap. 2.

45. See Linda J. Cook, "Brezhnev's 'Social Contract' and Gorbachev's Reforms," *Soviet Studies* 44(1992): 37–56.

46. *Izvestiya*, October 27, 1990. The new law on decentralized wage-setting went into force on January 1, 1991.

47. This gender division of labor is vital to understanding the political economy of the Soviet system, but unfortunately space does not allow its full treatment here. I have dealt with it at greater length in *Soviet Workers and De-Stalinization*, chap. 7; and *Soviet Workers and the Collapse of Perestroika*, chap. 5.

48. If workers showed up for work drunk, according to discipline regulations they were to be sent home. In reality, foremen would let them into work and put them on difficult or poorly paid jobs that other workers refused to do. By the same token these same foremen would have to act very gingerly when dealing with skilled workers in essential operations, for example, tool makers or machinists making spare parts.