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1. Concepts and Approaches

1.1 What is organizational innovation?

This paper explores those characteristics of the Soviet economy which help it survive and grow despite its well-known structural deficiencies: its ability to change itself, to adapt to new conditions, and to improve. This is accomplished through the introduction and diffusion of organizational innovations. Organizational innovations are changes in the ways individual efforts are coordinated and stimulated. Their introduction may serve the goals of improving economic efficiency, increasing political power, or promoting ideology.

Changing the incentives presented to economic agents and the ways in which their activities are coordinated influences the amount of goods and services output per unit of resources employed, i.e., the efficiency of the economy. Organizational change also impinges on the relative power, prestige, and status of economic actors; it makes some people bosses and others subordinates. Consequently, an important motivation for organizational change is the desire to gain or preserve power. Some ideologies contain a view of how economic activity should be organized. Therefore, commitment to an ideology may also provide a motive for organizational change. Ideology may legitimize innovations motivated by other considerations. Economics, politics, and ideology are intertwined in the process of organizational innovation, making an interdisciplinary approach necessary.

This study has two main threads: analysis of organizational innovations themselves, and of managerial attitudes towards organizational innovations as a determinant of their successful implementation and diffusion.

Most economic writings focus on the substance of particular innovations while political scientists focus on the process by which a decision to innovate is made and implemented.[1] A danger in analyzing organizational innovation purely from the standpoint of economics is that the political motivations in introducing the change are assumed away. The analysis of the substance of an organizational innovation which has not been actually implemented is of little relevance (we will discuss this type of innovation in detail later). The variety and sheer volume of organizational innovations in the Soviet economy are overwhelming, as Schroeder's (1979) survey makes clear. Analyzing each innovation on its merits would be difficult. For all these reasons, we focus mainly on the *process* of organizational innovation, trying to deduce the properties of particular innovations from it.

Most Western analysts are interested in the prospects for radical organizational change that would substitute some form of market system for the centrally planned economic system under which the Soviet people have lived and worked for more than 55 years. The reason for such a focus is the belief that only the market will solve the persistent and acute problems of shortages, low quality output, and waste of resources. Modifications in the current system are not considered seriously because they will not eliminate the problems just mentioned.[2]

We agree that the deep-seated problems of the Soviet economy cannot be eliminated within the system of central planning. However, we disagree with ignoring partial improvements and waiting only for radical upheavals.[3] Such a view brings to mind the position of radical Marxists, who argue that cyclical instabilities and unemployment are part and parcel of a capitalist system and can be solved only by abolishing the latter. The problems identified by the Marxists remain acute and ineradicable, yet they have

not caused the demise of capitalism. In part, this is due to seemingly minor organizational innovations, such as unemployment insurance and welfare, that made the burden of unemployment and recession easier to bear. In part, the viability of a market economy is due to the fact that its liabilities are sufficiently balanced by its assets, such as high and growing living standards, and possibilities for upward mobility and independence. The same reasoning can be applied to the Soviet system. We therefore feel justified in focusing this study on organizational adjustments within the confines of the existing system.

1.2 Who are the managers?

In this study, we distinguish the attitudes of five groups of managers: the political elite, central managers, regional managers, directors of enterprises, and shop managers. The political elite (Politbureau) makes all the strategic decisions in the economy, as well as in the society at large, and appoints the top central managers of the economy. In particular, all significant changes in the formal organization of the economy can only be decided here. A lot of minor problems are also decided at this level, as the (admittedly incomplete) reports on Politbureau meetings in *Pravda* demonstrate.

The group of central managers consists of officials responsible for the management of the economy as a whole and its specific branches. The leading personnel of the economic departments of the party central committee, the state planning committee, supply committee, other committees (price setting, labor, science and technology, etc.), council of ministers, and sectoral ministries form this group. It is somewhat arbitrary to lump sectoral managers representing "departmental" interests, and staff

organs concerned with particular functions throughout the economy, into one group, as the scope of the study forces us to do.

The coordination of economic activity in a region as well as supervision over the activity of all production units in the given region, is exercised by the territorial party organs, referred to in this paper as regional managers.

Enterprise management (director, chief engineer, directors' deputies) and shop managers directly control the production process. The people in these positions deal directly with workers, and produce real, observable, results: goods and services.

1.3 Formal, informal, and second economy

The Soviet manager works in two types of environments simultaneously: a formal environment delineated by the laws, official rules, and regulations; and an informal environment, regulated by the "common law," or the rules which have evolved from the interaction of economic actors themselves.[4] The formal organization of the Soviet economy is defined in the constitution, general statute of the appropriate ministry, statute of the enterprise, and other legally binding documents, as a multilevel hierarchy with relations of command and subordination between successive tiers of organization.[5] The internal structure of each organization (ministry, enterprise) is also prescribed in some detail. Rules and regulations list the responsibilities of each organ, its area of competence, commands which it will receive from superior bodies, and commands which it will give to subordinate levels. (One important consequence of such formal organization is that almost every manager is at the same time a subordinate).

The rules governing the work of a bureau or a firm inevitably leave numerous gaps. These gaps are

filled by coordination procedures and incentives which evolve spontaneously in the course of work, and which are called informal organization. This is observed in all hierarchies, or bureaucracies, alongside the formal organization.

At this point, we need to redefine the term "second economy." In the literature, the term has been used to describe extralegal activities for officially approved purposes, extralegal activities for extralegal purposes, and even legal activities that are not ideologically pure, such as private plots in agriculture.[5] However, in popular usage, the term "second economy" is associated with activities in pursuit of personal enrichment, in disregard and often to the detriment of the goals of the formal economy. We will be using it in this sense.

The Soviet economy is comprised of three intertwined structures: the formal, informal, and second economies, fitting Merton's (1957, 140) theory of anomy. According to this theory, it is necessary to make a distinction between legal and illegal goals and means.[7] These combine to produce different types of social behavior, as shown in the matrix below:

	Legal Means	*Illegal Means*
Legal Goals	Formal Economy	Informal Economy
Illegal Goals		Second Economy

That is, the formal economy accomplishes legal goals by legal means; the second economy strives toward illegal goals using illegal means; and the informal economy employs illegal means to further legal goals.[8] The fourth combination (illegal goals and legal means) would be something analogous to the

Western "work-to-rule" strike; it is not considered here.

One of the main themes of this study is that the informal economy reinforces and supplements the formal economy, and represents an important reserve for the Soviet economy.[9]

The formal economy in its pure form (the economy as it "should be") exists only as an ideological fiction. It belongs to the mythological level of the public consciousness, along with social equality, internationalism, the leading role of the working class, and socialist democracy. The endemic feature of Soviet life in all its aspects is that people at all levels of the hierarchy draw a very clear distinction between the two layers of conscience: mythological and pragmatic. Only rarely do they confuse their material behavior, which is usually governed by pragmatic conscience, and verbal behavior, which in many cases is controlled by the mythological layer.[10]

The formal economy presupposes that all those Soviet values which pertain to the economy are effective and practical: planning is efficient; technological and organizational innovations are the objects of highest preoccupation on the part of all managers and workers; and the majority of workers are extremely conscientious. However, in practice Soviet managers and workers, even those who sincerely profess the virtues of the socialist economic system, ignore the unreal world of the pure formal economy and behave according to the rules of the informal economy whenever these supplant official laws and regulations:

> Our management is being conducted in two languages: the official ("right") language, and the unofficial ("wrong"), but real language of management practice, and managers have to learn how to distinguish the official commands that have to be taken serious-

> ly from those which can be ignored. This delicate problem is solved with the help of a huge layer of informal relations, and through traditions, customs, and stereotypes in which lie the keys to deciphering things that cannot be discussed in the language of orders and instructions.[11]

Both the informal and second economies operate outside the realm of written law. The actors in the second economy, as defined in this study, pursue private gain, irrespective of the consequences for the officially formulated goals of the economy. For this purpose, they violate laws and official rules. Participants in the informal economy seek personal advancement through serving the official goals of the formal economy (reaching a plan target, improving the efficiency of an enterprise, promoting technological progress), albeit by informal (often illegal) means. When goods or services are exchanged in the informal economy, they are usually producer goods, or at least goods not intended for the personal consumption of the parties to an exchange. Personal gain from engaging in the informal economy takes the form of recognition from one's superiors, promotions, and bonuses.

By contrast, exchange in the second economy is aimed at providing direct, immediate personal gains (cash, consumer goods, and services) to the parties involved. Needless to say, certain transactions belong both to the second and the informal economies. For example, an enterprise supply agent engaged in procuring materials necessary for plan fulfillment and paying cash for them acts in both economic structures simultaneously. However, the two spheres (informal and second economies) appear to be sufficiently separated for us to disregard inevitable overlaps between the two.

The Soviet courts, as well as the mass media, make clear distinctions between activities in the informal and second economies. In those rare cases in which involvement in the informal economy is punished, the fact that "the defendant did not seek his own benefit in the given illegal act" serves as an extenuating circumstance. For example, Soviet laws thoroughly restrict managerial discretion in using overtime, but these laws are honored mostly in the breach, without any fear of prosecution.[12] The reason is that managers compel workers to work extra hours in order to fulfill the plans:

> It would have been unjust to present these people as greedy and unscrupulous. The 'business-as-usual' situations are propitious for different kinds of violations and abuses. But the overwhelming majority of these managers are motivated by noble objectives. They are sincerely attempting to do their tasks in the best way possible...[13]

In 1966, a leading journalist, Anatoly Agranovsky, published an article entitled "The Naive Mercantilist." The hero of this article was an energetic collective farm manager who turned his farm from a backward operation into a flourishing one, trespassing many laws and rules in the process. Ever since this article was published, materials have been appearing in the press favorable to Soviet entrepreneurs who are forced to infringe on the law.

If we resort to Weberian "ideal types," the main figure in the second economy is an underground entrepreneur or director of a store speculating in deficit consumer goods. The hero of the informal economy is an active, resourceful, and hardworking manager. Being devoted to his enterprise, the hero does not miss any opportunity, legal or illegal, to improve

its performance, fulfill the plan, gain public recognition and earn the approval of his superiors.

We will treat official and unofficial organizational innovations symmetrically, exploring the areas where they complement each other and the areas of conflict between the two types of organizational innovation.[14]

In our analysis, we will rely on the economics of organization framework. Its main postulates are: human agents are limited in the amount of information they can receive and process; and economic phenomena are complex and idiosyncratic, not readily available to those removed from the scene of the action.[15]

1.4 Sources of information

This study makes use of a survey of Soviet emigres, special essays, content analysis of the Soviet press, Soviet sociological studies, and Soviet economic and general literature. The first three sources are described here.

The survey respondents included former enterprise-level line managers (director, chief engineer) and staff managers (heads of functional departments such as labor and accounting); staff department employees; and engineers and specialists who were involved in designing and implementing organizational innovations. For the most part, survey questions used an open-ended response format.

The main goals of the survey were to identify the economic actors initiating and promoting organizational innovations, as well as those hampering organizational change, to establish the motives of these actors, and to discover the determinants of the success or failure of innovations.

We recognized that survey findings may not be fully generalizable. The actual sample was too small (40 respondents, each reporting on 2-3 innovations)

to represent faithfully the universe of organizational changes in the USSR, and the socio-demographic characterics of respondents differed from those of the bulk of Soviet managers. Moreover, the attitudes of our respondents toward their Soviet past were inevitably colored by their subsequent experiences in the United States.

Several other problems should also be noted. The time that had elapsed since the events discussed in the interviews occurred must have caused some loss of information (although none of the respondents complained about that). A few respondents were wary that their participation in the survey would be interpreted as a hostile action and might cause retaliation by the KGB against them or their kin left behind in the USSR.

In most cases, respondents were talking about the implementation of innovations in which they personally participated. It was clear to the interviewer that most of these people loved their jobs and were proud of them. They took pleasure in recounting their experiences. Under such circumstances, it is natural to expect that respondents would overestimate the results of those innovations in which they took part. This problem was discovered too late in the course of the project to permit us to insert questions that could be used to control for the effect of each respondent's personal participation. This positive bias was probably (but, in our opinion, not completely) counterbalanced by the generally critical attitudes expressed toward Soviet society. Nonetheless this survey still retained its main advantage, in obtaining responses which were undoubtedly much more frank than could be obtained in any survey conducted in the USSR.

Three essays were commissioned from Soviet experts. Dr. L. Alievskaya wrote about her experience as a professor of mathematical economics in the Academy of Management. She formerly taught Soviet mana-

gers (central and enterprise level, in our classification) who were sent to the Academy to upgrade their management skills. The curriculum emphasized innovations such as mathematical methods of planning, and Dr. Alievskaya observed managerial attitudes toward this type of innovation first hand. Mr. P. Mezhiritsky, whose career in Soviet industry included engineering and middle management positions, wrote an essay on the organizational adjustments enterprises make to cope with the problems of supply concentrating on barter among enterprises. Mr. S. Korsunsky was involved in the development and implementation of new organizational structures in a sector of the economy. His essay analyzed both the process of implementation of organizational innovations in the formal economic structure, and informal organizational adjustments to the supply problem, the autarkization of enterprises.

Content analysis of the Soviet press provided us with information on the latest trends in organizational innovation. The structure of the content analysis was kept as close as possible to that of the survey questionnaire. The major emphasis was an examination of the different types of participants in the process of organizational innovation: enthusiasts; those who stay neutral; and opponents, both open and hidden. The content analysis was useful in revealing the attitudes of the Soviet leadership toward organizational innovations of various kinds. Soviet newspapers, especially *Pravda*, perform not only ideological and propaganda functions, but also a pragmatic function necessary for governing a complex modern society. Four newspapers were chosen for content analysis: *Pravda*, *Izvestia*, *Sovetskaya Rossiya*, and *Literaturnaya Gazeta*.

2. Formal Organizational Innovation

2.1 Ideology and innovation

Soviet ideology considers change and dynamics as positive features of social life. Changes in the economy receive special praise, due to the place of economic development in Marxist theory, as well as to their practical importance. This cult of change explains why leaders and managers at all levels of the hierarchy try to appear dynamic and sensitive to innovation. The labels of "conservative" or "retrograde" in Soviet political ideology are among the worst perjoratives.

Historically, all of the leading Soviet rulers have presented themselves as dynamic and anticonservative. Stalin and Khrushchev in fact did make revolutionary changes in many spheres of the society. Andropov created an atmosphere of change, even if few real changes were carried out in his short tenure. Even Brezhnev, the first Soviet leader to deliberately lead the country into stagnation, tried to present his leadership as favorable toward change. Indeed, his rule began with the enactment of the 1965 reform and witnessed a large number of organizational innovations.[16] Gorbachev strongly criticized his predecessors for immobility and declared the need to improve the economic mechanism, although he has not announced any really new steps in this direction thus far.

The process of organizational innovation in the economy is being institutionalized. A republican conference on organizational innovation was held in Estonia in 1978, and following this, a national conference was held as well.[17] Whereas previously organizational innovations were devised and implemented by the general economic research institutes and the general economic hierarchy, specialized organizations are now being created to carry out these

functions.[18] The first step in this direction was the creation in the mid-1960s of a Gosplan department on the introduction of new methods of planning and economic incentives.[19] (This institutionalization of innovation will likely slow it down; if the suggested procedure for implementation of organizational innovations is followed, it should take 5.5-9.5 years merely to develop an innovation and receive all the required official approvals.)[20]

2.2 Technological and organizational innovations

The similarities between organizational and technological innovations are easy to note: both serve to cut costs and make possible new or improved products and services; both undergo a similar cycle of research, development, experimental testing, implementation, and diffusion. There also exist important differences between the two types of innovations, which lead to a different attitude being taken toward them by the political elite.[21] The main difference lies in the fact that organizational innovations much more strongly impinge on power and ideology than do technological innovations.

Technological change influences the amount of power held by particular enterprise or sectoral managers, whose activities are tied to specific products or processes. As a rule, technological innovations do not affect the power of the political leadership. The only exceptions are those innovations which threaten its monopoly on information: xerox machines, direct telephone dialing to the West, etc. Organizational innovations influence power much more directly, by affecting the degree of control the political apparatus has over resources and the appointment of managers. But the most important innovation is the ability to form new organizations.

Lenin understood that organization is a potent force. He paid great attention to the way in which his party was organized, and won power in large measure because of the effective use of his organizational weapon. Lenin's heirs share the realization of the potential of organization for seizing and holding power. Political considerations, therefore, call for severe restrictions on organizational innovations. And political considerations prevail. The primacy of political objectives is not only Soviet practice, but also a vision of the world, part of official ideology. Mr. V. Medvedev, former head of the department of science and higher education of the Central Committee and a member of the Secretariat, recently repeated Lenin's famous words that "Politics should have a higher priority than economics," and bluntly stated that "management of social processes has to be subordinated to the achievement of certain political goals."[22]

Therefore, the most fundamental principle of the Soviet system is the elite's monopoly on legal organization. Unofficial organizations of stamp and coin collectors are barred along with political and ethnic organizations. Innocence of purpose does not matter; it is the fact of organization that is not allowed. This predetermines the attitude of the rulers toward organizational innovation. While managers at all levels are harangued to take initiative in introducing technological innovations, no such calls are issued with respect to organizational innovations. Official statutes define the formal structure of the economy in great detail. Some minor matters are left to the discretion of central management (ministries), and very little to enterprise level management.[23]

Thus, when a railroad administration (a very large unit, comparable in size to a large American railroad) tried to reorganize the work of locomotive brigades, the basic work unit in the industry, without the permission of the ministry, this was charac-

terized as impermissible arbitrariness.[24] Directors of newly created large production associations in industry cannot change their internal structures.[25]

This attitude gives rise to a preference for technological solutions over organizational ones. The support and funding given by the rulers to management automation schemes in the late 1960s-early 1970s can be explained by the large technological component of this proposed solution to Soviet economic problems. Substitution of technological for organizational innovation can also be observed in sectors of the economy with which central planning copes relatively badly, such as agriculture, construction, and services. Since Soviet industry is more successful than these sectors, attempts have been made to "industrialize" agriculture, construction, and to some degree even services, by changing their technology. This is in spite of the fact that the root cause of the relatively poor performance of these sectors is organizational rather than technological.[26]

Lagging behind the West in the level of its technology,[27] the Soviet Union has long resorted to the imitation of foreign technology.[28] From an ideological perspective, this reliance on imitation is embarassing to the rulers, since it testifies to the West's technological superiority. However, imitation of Western technological innovations is otherwise harmless to the Soviet political system and is highly beneficial to the economy.

The situation becomes more complicated with respect to imitating Western economic organization. Considerations of ideological impurity apply here *a fortiori*: it directly follows from the official interpretation of Marx's theory that Soviet economic organization is superior to that of capitalist countries, so that any imitation should be done by the West, not the USSR.

In addition, two other serious considerations arise with respect to the importation of Western organizational innovations: the compatibility of elements of Western economic organization with the Soviet economic system; and their compatibility with the Soviet political system. Recently Soviet rulers have been very tolerant of the imitation of such Western innovations as mathematical methods of planning, input-output techniques, critical path methods and management methods on the level of firms.[29] These types of innovations have been widely implemented.

As our essayists and survey respondents maintain, the implementation of mathematical methods of planning and critical path methods was not successful (except for some special cases) because the requirements of these methods clashed with the workings of the Soviet economic system, in particular with those of the supply system. Tretiakova and Birman (1976) reached the same conclusion with respect to input-output techniques.

The market is the most intriguing Western institution to those bent on imitation. Many of the organizational innovations of the early 1980s have had a distinctive market flavor, as for instance, the team method and the economic experiment with broader autonomy for individual enterprises. Central and regional managers realize that markets would eliminate the *raison d'etre* for some of them (e.g., central planning and materials allocation groups), and drastically narrow the power of others. In the longer run, markets threaten the very political structure of the Soviet economy. Market reform in Czechoslovakia was closely followed by the political turbulence, and this lesson was not lost on the Soviet rulers. As a result, while imitations of market mechanisms on a small-scale are allowed, larger scale applications are effectively forestalled.

The incompatibility of most Western economic arrangements with the Soviet economic and/or political system results in the original character of most real organizational innovations.[30] Market-style innovations (in Soviet terms, those directed at strengthening money-commodity relations, e.g., many features of the 1965 reform), and managerial and planning techniques that are borrowed from the West are generally rejected by the system, and are reduced to ritualistic status.

2.3 Experiments in organizational innovation

The concept of economic experimentation, alien to the Soviet system only 25 years ago, has now become an organic part of official economic doctrine and practice.[31] Andropov's regime gave further impetus to discussion of the methodology of economic experiments.[32]

Economic experiments are difficult to conduct because of problems with controlling for the large number of "environmental" variables so as to obtain the "pure" effect of the variable under study. Economic experimentation in the USSR also faces an additional set of problems. Almost any large scale experiment is considered to be an inherent part of official policy. For this reason, it is "protected" by high authorities, in order to guarantee its "success." Otherwise, the people responsible for initiating the experiment would appear to be "adventurists," "bluffers," "yarn-spinners," etc. Thus, although experiments have become part of the economic practice, experimental thinking has not. Soviet economic experiments are usually carried out under artificially favorable conditions.

The "large scale experiment" with greater autonomy for enterprises which was initiated by Andropov and continued and widened by his successors, supplies

the most recent illustration. The conditions of the experiment were rigged from the beginning: experimental enterprises received materials and parts on a priority basis.[33] Since, as will be shown below, materials supply presents the gravest problem for enterprises, the result of the experiment was predetermined by affording the experimental enterprises supply priority.[34]

Even some Soviet authors dared to cast doubt on the value of this widely publicized experiment. Thus, Pavel Bunich (1974a, 10) wrote:

> It is a dangerous symptom: enterprises carrying out the experiment are supplied producer goods, transport services, and money for their production activity on a priority basis. In other words, they get privileges. And what will happen if this experience is extended to all branches?[35]

Instead of helping to determine the weak and strong points of the innovation considered, this type of experiment will always supply the answers the proponents of the experiment want to hear. Flaws of design, inevitable in any complex reorganization, will not be noticed until their ill effects show up in the performance of innovating units.

2.4 Ritualistic organizational innovations

In the past thirty years, the Soviet economy has been subject to almost continuous reorganization. Yet practically no improvment in performance can be traced to the numerous formal organizational innovations.[36] One of the main reasons for this ineffectuality is that many innovations are not real, but ritualistic. Ritualistic organizational change is introduced with the announced purpose of improving

economic performance. It is kept in place, with economic agents following all the prescribed motions, but is disconnected from real economic behavior. Most of the time, the Soviet media and special literature treat ritualistic innovations as if they were real. It is only after quite a long period following implementation that one can read (usually in special literature) that an innovation, formally enacted and enforced, actually does not work.

With ritualistic innovations, there is a risk of seriously discussing the effects of a change that was never operative in the shape officially proclaimed. Thus, a whole literature has recently emerged on the efficiency of the officially announced "New Soviet Incentive Mechanism,"[37] though it has no bearing on actual managerial behavior. The mechanism is a bonus system aimed at eliciting truthful information on the production possibilities of enterprises. But the announced (and analyzed) formulae are for the determination of the bonus fund only; actual bonus payments are determined differently.[38] Moreover, even the size of the bonus fund is actually determined differently from the announced formulae.[39]

Several categories of ritualistic innovations may be identified, based upon the origin of their ritualistic natures.

Ritualistic innovations are typical of all spheres of social life in the USSR (consider elections). Creating a favorable impression is an important motive for this activity.[40] When the political elite enacts purely ritualistic organizational innovations, managers on all levels have little choice but to imitate innovative activity, which they do not take seriously. The only purpose of such a game is propagandistic: to demonstrate to the Soviet people that the Soviet economy is undergoing serious improvement. Thus, all measures directed toward "strengthening the participation of workers in management" fit the purest form of ritual-

istic innovation undertaken for ideological purposes.[41]

One of the greatest ritualistic organizational innovations in Soviet history was the Stakhanovite movement in the 1930s.[42] It called on workers to follow the example of one Aleksei Stakhanov, a coal miner who was overfulfilling production quotas by a factor of about ten. Stakhanov's record-breaking performance was staged, as were those of his most famous followers in other sectors of the economy. Along with having propaganda purposes, this movement was also directed against the old technical intelligentsia, who allegedly were setting production norms too low, because of their bourgeois pessimism. Similar, though less dramatic, campaigns continue to this day. Consider Khrushchev's "workers-beacons," and the "movement for communist work" in the 1960s and 1970s.

Many ritualistic innovations are initiated with the sincere purpose of improving the economy and only become ritualistic in the process of implementation. There are several reasons for this. As previously noted, for members of the political elite, any choice between alternative organizational innovations is intrinsically tied to considerations of political survival and, therefore, the feasibility of an organizational change may not be the primary criterion on which it is chosen. Moreover, as was shown earlier, experiments are not effective in the process of choosing between competing proposals. Hence, there are bound to be some innovations enacted that clash in a fundamental way with the economic system. Thus, the economic system as a whole may require managers to do one thing, and the latest ill-conceived innovation another.

Examples of this include any scheme that restricts the number of commands a ministry can give to its subordinate enterprises. If a ministry cannot give some commands, it loses control over the corres-

ponding aspects of the enterprises' performance. Yet the ministry itself is held responsible for the activity of its enterprises by the central managers and the political elite.[43]

An innovation that puts managers into an untenable position usually reflects the latest party line. Because of this, one cannot criticize it as wrong and ask for its repeal. Even if this were possible, the repeal process itself would take a considerable period of time. In such situations, managers turn the innovation in question into a ritual and the actual mode of operation remains unchanged.

This is what happened when the 1965 reform cut the number of obligatory plan targets which enterprises received from their ministries. The latter continued to try to issue the same large number of targets as before.[44] Similarly, those features of the current experiment that circumscribed the power of ministries and of All-Union industrial associations (*glavki*) were found to be ignored in practice.[45] Another case was the attempted implementation of automated management systems, an extremely broad and expensive undertaking that took place in the 1970s. All our respondents who participated in the implementation of this innovation testified that each of the functions that were automated continued to be carried out manually, at least in part because of the low reliability of the computer equipment. The personal experience of one of the authors generally confirms this observation.[46]

In these cases, turning innovations into rituals spared the economy the consequences of implementing an arrangement incompatible with the system. This can itself be thought of as an informal organizational innovation-- illegal, but useful for the official economic goals. In fact, the formal economic structure usually catches up with these sorts of informal innovations after a time. The errors behind the erstwhile formal innovations are realized at the

top, and the latter are gradually rescinded. Witness the increase in the number of obligatory plan targets over the course of the 1970s, and especially after 1979.[47] Witness also the drastic scaling down of hopes pinned on automated management systems in the late 1970s-early 1980s.[48]

One predictor of whether an innovation will become ritualized is whether it endangers the execution of the principal task of the managers implementing it. If so, the innovation will remain only on paper. In 7.5 percent of all cases, respondents to our survey cited a contradiction with other, more urgent, tasks as the reason for failure in implementing an organizational innovation. Another 7.5 percent stated that "the innovation contradicted the interests of those who were implementing it." This latter category undoubtedly includes some cases of systemic incompatibility as well.

The most significant course by which innovations become ritualistic is the process of the universalization of local innovations.[49] Although most of the formal organization of the economy is established by the political elite and central managers, there is sufficient room for organizational innovations by the enterprises, mainly on the level of basic work units. Regional managers and ministry officials publicize successful experiences of subordinate enterprises since it serves to advance their careers. The hallmark of success for such formal organizational innovation from below is to attract the attention of the political elite. The latter then issues a decision praising the successful organizational innovation and recommending it for introduction elsewhere in the economy. This is followed by a campaign, waged by central and regional management, for the universal implementation of the organizational innovation so approved.[50]

Since there are so many of these innovations waiting to be spread around, the attention of central

managers is constantly turning toward new ones. Given the strain on the information processing capacity and attention of the political elite and central managers, this means that enforcement resources are shifted from the older innovations to the newer ones. As our analysis shows, 34 percent of all innovations discussed in *Pravda* in 1983 were those initiated in the current year; 35 percent were from the previous year. Organizational innovations introduced before 1978 were mentioned in only 18 percent of the cases. As A. Radov remarked, "[after a few years,] No trace is left of organizational innovation."[51] In his last official speech, Andropov complained that some organizational innovations are too quickly forgotten.[52] All that an unwilling manager has to do in such circumstances is to sit out the relatively short period during which the current innovation is being actively promoted and imitate its implementation.

Railroad transport affords a recent example of this phenomenon.[53] Some enterprises which were not receiving enough serviceable rail cars to load their output were setting up in-house facilities for repair of the cars (normally a responsibility of specialized units under the ministry of railroads). The desperate situation in railroad transport in 1982 pushed the authorities to issue a Central Committee decree approving the establishment of in-house rail car repair facilities by all enterprises with significant rail transport requirements. Regional party organizations started to pressure enterprises everywhere to set up railroad car repair shops.

The success of many an innovation is due to local factors that are not likely to be repeated elsewhere. Particular innovations may fit local conditions, resource availability, and inclinations on the part of management. When implementation of such an innovation is decreed across the board, it is inevitably forced on some enterprises for which local conditions make it inappropriate. Rail car repair

shops established by enterprises which have excesses of labor, equipment, materials, and willing and enterprising managers will be successful. The same shops forced on enterprises where workers and materials would have to be diverted from other tasks, and where managers do not have the necessary initiative, will be a disaster, unless the innovation is turned into a ritual by the lower level managers.

Politically, the root of this universalization of local innovations is a desire for a quick fix, a hope that some fast and simple action will solve a nagging problem. Of course, such attitudes are not restricted to the Soviet political elite. Economically, several factors are at work. The rulers know that enterprise managers have little incentive to introduce organizational innovations even when they are allowed to do so. Many well-known disincentives to technological innovation at the enterprise level (most importantly, disruption of current production)[54] discourage the majority of managers from actively seeking out and implementing innovations. Therefore, the leaders cannot hope that successful organizational innovations will be spread by spontaneous diffusion. Instead, they have to rely on pressure, taking matters into their own hands.

But the political elite and the central managers often do not have sufficient information to tailor particular innovations to the needs of specific enterprises. The best they can do is to order the implementation of what appears to be a good innovation across the board (an order to "apply where appropriate" will not be enforceable, since too many managers will claim that the given innovation is not appropriate for their conditions). Our analysis of four leading Soviet newspapers during Andropov's rule shows that only 36 percent of all organizational innovations discussed were considered to be local, while 26 percent were considered universally appli-

cable and 19 percent applicable to an entire sector of the economy.

The great variety of local economic circumstances assures that there will be no uniformity, even in the spread of rituals. Innovations that are in most instances ritualistic, may actually be effective in some cases. Thus, many mergers of enterprises into production associations were ritualistic, but there undoubtedly do exist some real production associations. Most automated management systems (ASU) are of little use, but there are some systems that are highly effective.

Finally, a number of organizational innovations are turned into rituals by the self-seeking behaviors of lower-level managers. Implementation of innovations requires the managers to expend effort. Rewards for this effort are often not clear. The most ample rewards are associated with the execution of current production targets. Organizational innovations may influence performance only indirectly and with delays; their impact is also far from certain. If punishment for not implementing an innovation is easy to evade, a rational manager maximizing his utility will try to avoid the effort required for implementation.[55] The same would happen if an innovation threatened the manager's power over his subordinates.

The command "implement organizational innovation X" requires enforcement: superiors checking what their subordinates are doing, punishing those who do not execute commands and rewarding those who do more than they are told to do. But in practice, superiors issue a large number of commands (plan targets), ranked by importance, and devote more attention to enforcement of the more important ones and less attention to enforcement of the less important ones. Enterprises frequently report their performance in terms of output and get most of their rewards for this.[56] Other targets get less attention; punish-

ments and rewards are smaller for less important plan targets. This is reflected in the degree to which different targets are met. If annual plans for industrial production are usually fulfilled, annual plans for technological innovation are executed only by 80-90%.[57] Organizational innovations probably rank lower than technological innovations, with the exception of the few on which the political leadership has placed the greatest stress. Accordingly, enforcement is not strict and possibilities for evasion exist.

The results of our survey help us to appreciate the role of enforcement in the implementation of formal organizational innovations. Persistence and pressure on the part of superiors was regarded by our respondents as by far the most important factor in the successful implementation of innovations, followed by pressure from party organs. Together these two factors comprised 57% of all the factors identified by respondents as being associated with successful implementation.

If we turn to the factors adversely affecting the implementation of organizational innovations, complexity of the innovation itself (which makes enforcement hard) appeared to be most important. Bad organization and territorial dispersion, which accounted for 8 and 5 percent respectively of cases of adverse influence, also had a negative impact on the enforcement of reforms. Organizational innovations often do not have easily observable components (except for the ways in which papers are shuffled about). Therefore it is easier to simulate their implementation than to check on its progress.

This analysis suggests two other predictors of the likelihood of an innovation turning into a ritual. The more complex the innovation, the easier it will be for lower ranking managers to fake its implementation, and the harder it will be for the upper echelons to ascertain whether it is actually

being implemented. If current incentive arrangements, even to an outside analyst, are "so complex as to almost defy description,"[58] one may safely assume that this makes following these arrangements difficult and evading them easy.

The complexity of an organizational innovation depends, among other things, on the number of different actors involved and on the degree to which sophisticated scientific tools are required. Thus, the territorial agro-industrial complex is an example of a very complicated arrangement because such different actors as collective farms, industrial enterprises, fertilizer supply units, units repairing agricultural equipment, party organs, and ministries are all involved. Consequently it has a large ritualistic element.[59] By contrast, the "team working with one contract" is a relatively simple innovation.[60]

Optimal planning is complex because of the sophisticated method used. Dr. Alievskaya's essay shows that the ritualistic element predominates in the implementation of this innovation. In our survey, the complexity of the innovation was regarded as the single most significant adverse factor in the implementation of organizational innovations (named in almost a quarter of all cases). Simplicity appears to be a significant, but not the most critical, factor in the successful implementation of organizational innovations.

Another predictor is labor intensity. The more work (in terms of manhours and qualification) required to carry out an innovation, the more likely it is to become ritualistic. The currently promoted "certification of workplaces" requires that a census of workplaces be conducted so as to determine the volume of capital per worker, the quality of equipment and technological processes used, and the organizational and social characteristics of each workplace, as well as the educational and professional

levels of workers and their relationship to the requirements of technology. Methods of labor organization, characteristics of brigades, and their interaction with other brigades and services are also to be analyzed. This effort is crowned by deriving a technological-economic-social-organizational evaluation of each workplace.[41] The results are to be used to abolish excess workplaces. All this is to be done by the enterprise white collar staff over and above regular duties. In most cases, certification of workplaces can be done in only *pro forma* fashion.

Ritualistic innovations impose additional costs on the economy without bringing any economic benefits, although payoffs in terms of propaganda and political struggles may be considerable. The cost of ritualistic innovation is the salary of the people engaged in the implementation of an innovation and the opportunity cost of managerial time and attention diverted into simulating compliance with the new ways of doing things. The cost imposed by the optimal planning schemes is low, since only a few hundred, or at most several thousand, people were involved in developing and implementing them, and the managerial time diverted to this purpose was negligible. On the other hand, automated management systems, which are mostly ritualistic, cost a great deal. Hundreds of thousands of people and thousands of computers were involved in developing and implementing the systems. Large numbers of managers of all ranks were involved in implementation, diverting their time from real problems. The cost of this innovation must have been staggering. Ritualistic innovations also breed cynicism, sceptical attitudes toward all innovations, and corruption by involving people in continuous deception.

3. Informal Organizational Innovations

The process of informal organizational innovation is, appropriately, less structured and of a trial-and-error, natural selection nature common to so many processes of change in different societies. We therefore focus here not on the process, but on the substance of some strategic innovations.

3.1 Major problems of the Soviet economy

We will focus our discussion on informal innovations that provide a response to the most critical problems of the Soviet economy: supply and discipline.

Supply and (indirectly) discipline were identified as the chief problems in a survey of 241 enterprise directors conducted by Karagedov (1970). Our analysis of Soviet newspapers, which reflect the opinions of central managers and the political elite, confirms these results. Out of 22 organizational flaws identified by our content analysis, 16% of complaints related to supply problems, and 37% to low work ethics.

In our own survey, in which there were no prompts, specific problem areas (supply, labor) were mixed with responses relating to general ways of solving problems (e.g., giving more autonomy to the enterprises). If one controls for the latter type of response, supply clearly emerges as the main perceived problem of the economy. The supply system also ranked second, after complexity, as the factor most adversely affecting the implementation of organizational innovations. Asked to suggest improvements for the Soviet economy that would take into account actual conditions, 20 respondents made general suggestions such as better planning, control or organization at work; 16 suggested giving more

autonomy to the heads of economic units; and 15 advocated improving the supply system. Asked to suggest improvements in the Soviet economy based on their American experiences, the largest group (14 answers) suggested giving more independence to the enterprises, while the second largest group (10 answers) suggested improving supply.

Supply is also perceived as the gravest economic problem by both workers[42] and central managers.[43] As for evidence on the perception of labor discipline problem, it is worth recalling that Andropov made the campaign for the improvement of labor discipline the main thrust of his economic strategy. By all accounts, this struggle for discipline was generally supported by the Soviet people. After a lull during Chernenko's tenure, the discipline campaign has been vigorously renewed by Gorbachev.[44]

3.2 Informal responses to supply problems

The two main responses made to supply problems are trade (mostly barter) among the enterprises, and the establishment of in-house production of inputs, or autarkization. Every time an enterprise director conducts trade with his colleague at another plant or sets up his own production facility for an input previously obtained from an outside supplier, a new feature is added to the organization of the economy.

Both responses are based on fundamental economic mechanisms, distinct from the formal allocation of supplies by command. Trade among the enterprises is nothing else but a market working within the plan. This market operates chiefly on the errors in planned allocation, reallocating inputs from those who have but do not need to those who do not have but need. This market-born-out-of-plan has attracted the greatest attention from Western researchers;[45] and it is seen as generally beneficial to the economy.[46]

Autarkization represents an organizational reaction to the supply problem which is the polar opposite of exchange among the enterprises. It also runs counter to economic efficiency, which probably accounts for the fact that it has received less attention from Western economists than exchange among the enterprises. Since at least Adam Smith, economic theory has held, and rightly so, that increased productivity is achieved through greater division of labor. Specialization helps develop higher levels of skill among workers, is conducive to mechanization, and allows economies of scale to be realized in each operation. Autarkization is treated as damaging to economic efficiency. Among the most striking examples of the ills of autarkization on the sub-national level was Mao's policy of regional self-reliance.[57]

Therefore, according to conventional economic wisdom, autarkization of the enterprises and ministries in the USSR would appear to be as bad for efficiency as protectionist policies on the part of a nationalistic government. If one is to resort to historical analogies, the emergence of self-sufficient feudal estates in place of the "world-wide" division of labor after the fall of the Roman empire comes to mind.

Increasing specialization requires the coordination of more economic actors.[58] Division of labor is good for the economy only if the benefits of specialization outweigh the costs of coordination (and, of course, transport costs). Therefore, one may expect that an economy in which coordination costs are greater than those which occur in Western market systems should also exhibit lower overall degrees of specialization. Research on the centralized supply system supports the view that costs of coordination in the Soviet economy are higher respectively than those in developed market economies. This alone would argue for a lower degree of specialization in the USSR, as compared to Western stan-

dards. In the USSR, only a few percent of metal-working products are produced in specialized plants, against 50-70% in the US.[69] Almost all (90-95%) of the components going into aircraft are produced within the Ministry of Aviation Industry; the number of plants contributing to the manufacture of a plane is considerably smaller than for a comparable plane in the US.[70]

This lower degree of specialization is rational: it takes into account actual existing costs, rather than abstract economic principles. A higher degree of specialization under the given conditions would actually be harmful to the Soviet economy: losses from poor coordination would outweigh the productivity gains from greater division of labor. As coordination of enterprises becomes more difficult, the degree of autarkization must increase. On the other hand, as the final product requires progressively more complicated component elements, in-house production is made less technically feasible.

Since coordination within a ministry is easier than between ministries, there is a tendency to prefer suppliers from one's own ministry, even when these are geographically remote, over local "alien" suppliers. Thus, standard prefabricated concrete parts are shipped across the country from the concrete factory of a ministry to its construction project, defying all notions of rational supply.[71] Yet even within a ministry, there are enough problems in securing supplies to prompt enterprises to resort to in-house production.

Local units of the Ministry of Installation and Special Construction (Minmontazhspetsstroi) each have their own auxiliary metalworking shops.[72] Fifty-seven percent of the equipment in these shops is standard issue. The rate of utilization of the equipment in each shop is very low (15-20%). Creating a specialized shop that would serve the needs of all the units of the construction ministry in a given

region would raise the rate of equipment utilization and exploit economies of scale. But this is outweighed by the losses in the main activity of the units concerned (construction) due to the unreliability of supplies, delays, and inability to get the exact types of inputs needed.

In-house producton of inputs necessary for the main production line is the most important form of autarky. Soviet machine-building enterprises neglect production of spare parts for the machines they produce, so that a substantial part of this task falls upon the users of the machines. Metalworking products are produced internally because of their great variety and difficulties in obtaining desired types and sizes from suppliers.

Autarky is not restricted to relatively simple goods; producing machine tools for in-house use is not infrequent. This has given rise to the so-called "third machine-building sector": the machine-building shops in non-machine-building plants.[73] This sector consists of mechanical and repair shops, expanded to produce equipment. In 1980, these shops produced 44% of the total stock of machine tools in the economy, up from its 1962 share of 41.4%.[74] Autarkization is observed both in very large modern enterprises and in small, obsolete ones in all sectors. In the highly visible Volga car plant, in-house output of machine tools (including robots) has reached a value of 40 million rubles per year, and is expected to double soon. These machine tools are not only manufactured, but also designed, in-house. The difference between this and the activities of some American automobile companies which produce their own machine tools is that the latter build these tools mostly out of parts produced by specialized subcontractors. The Volga car plant, in contrast, has to make most standard parts, such as castings and integrated circuits, in-house.[75] The same process goes on in much less glamorous enterprises. The satirical magazine

Krokodil (Crocodile) described a shoe factory in Vinnitsa which could be mistaken for a machine-building plant (it builds machines for its own use), for a chemical plant (it produces glue), or for many other kinds of enterprises.[76]

Services such as repair, construction and transportation constitute another area of autarkization. Repair is almost exclusively done in-house; Soviet manufacturers are notorious for not servicing their products after their sale.

The trucking industry is a case in point. The Ministry of Installation and Special Construction is in charge of installing production equipment and constructing complex and non-standard projects.[77] Its basic production units (the fifth level of the hierarchy, counting from the top) are districts (*uchastki*). In each important industrial region, there will be many such units belonging to the ministry's various main administrations. Yet each unit will create a full set of auxiliary production shops for its own use, and will not share these with other units.[78] About thirty units of the ministry in the Kuibyshev region had 1,200 cars and trucks among them, in fleets ranging from 5 to 120 trucks. A plan for rationalizing the structure of the sector included merging the small trucking services of the different units of the ministry into one well-equipped regional trucking enterprise that would serve the needs of all the units of the ministry in a given area (notice that the expanded use of the trucking services of outside organizations was not even contemplated). This plan met with fierce resistance from the construction enterprises and ultimately failed. The author of the essay argued that the managers who sabotaged the "rationalization" scheme were acting in the best interests of their enterprises and the economy. A centralized trucking unit would have served their needs much less reliably than their own small trucking fleets.

In construction, the usual problems of inter-enterprise coordination that give rise to autarky are compounded by the relative weakness of the sector itself. According to incomplete official data, the share of total construction volume accounted for by in-house construction rose from 8% in 1976 to 10% in 1982.[79] Almost all big enterprises have created their own construction shops. Autonomous construction also flourishes in the countryside, where up to 84% of all new buildings are being erected by the farms themselves.[80]

Another form of autarkization is in-house production of consumer goods and services for an enterprise's own employees. Such goods include greenhouses, summer cottages, housing, nursery schools and kindergartens, etc.[81] Agricultural production by non-agricultural enterprises (industrial factories, design institutes, etc.) for the needs of employees is a rapidly spreading form of autarky. This is caused by the weakness of the consumer goods and services sector (neglected by the rulers for decades), shortages of goods and services, and shortages of labor, which make it necessary to attract people.

The creation of agricultural units in industrial enterprises is promoted by officials. In the highly industrialized Kemerovo region, local party and state organs adopted a decree that ordered particular industrial enterprises (coal mines, metallurgical combines, chemical plants, etc.) to create auxiliary agricultural units. By January 1, 1983, these "auxiliary" units were producing 18% of all potatoes, 33% of the vegetables, 8% of the meat, and 6% of the milk produced in the region.[82]

The most active supporters of autarkization are enterprise managers. Though they rarely profess this support publicly, they introduce in-house production on their own initiative. Shop managers and workers, so far as they have attitudes concerning autarkiza-

tion, support it because supply interruptions would be damaging to the enterprise as a whole.

Central managers appear to be split in their attitudes toward autarkization. Ministry officials support, and in many cases, initiate it.[93] Ministries are evaluated by the degree to which they are successful in fulfilling the output requirements of the plan and autarkization helps enterprises to meet their plan targets.[94] In the case of the Ministry of Installation and Special Construction, managers at all levels resisted the dismantling of autarkic units.

Central functional managers oppose autarkization. Apparently, Gosplan resisted the creation of an in-house machine-building capacity at the Volga car plant.[95] One of the leading figures in Gosplan recently attacked the practice:

> Burying in oblivion the requirement of specialization, some managers began to provide themselves with their "own" services, pretended that this was more reliable because suppliers do not fulfill their obligations. This tendency, which became widespread because of existing flaws in the economic mechanism, results in increases in the labor and material unit costs of output.[96]

Regional managers are ambivalent toward autarkization. On the one hand, they favor the autonomy of the enterprises in their territory from outside suppliers (they themselves are judged by the performance of their subordinate enterprises and want to minimize supply disturbances for the latter). Autarkization of enterprises makes the task of regional managers easier. The party press is filled with complaints of party officials that they have to spend the lion's share of their time in procuring supplies.

Official party policy condemns such activity on the part of local party organs because it distracts them from their essential duties: political education and control over the cadres. However, Soviet leaders do not take seriously their own reproaches in this respect, since they understand that without party help, the economy would not function as well as it does. At the same time, regional managers disapprove of autarky when it results in enterprises within the region duplicating the same production facilities.[87]

The political elite displays a negative attitude toward autarkization, as its Gosplan and academic consultants advise. No official document approves of the practice. Now and then it is condemned in official pronouncements, though never in harsh enough language to signal an actual crackdown.[88] Such proclamations are all the more weakened by the support political leaders give at least one form of autarky, in-house production of food and housing construction.[89]

The equivocal attitude of the political elite toward autarkization allows Soviet journalists to express their own, generally supportive, views on the subject. One article in *Pravda* was cheerfully titled "We build ourselves,"[90] and another article on the in-house production of consumer goods and services for the employees of a rail refrigerator car repair depot was published in a section on "progressive experience" and was extremely favorable toward the enterprising manager.[91]

The manager setting up internal production is portrayed in the media as thrifty, enterprising in the good sense of the word, and working hard to accomplish his task. Usually, these qualities are summarized by the word *khoziain*, (owner or master), again in an approving sense. On the other hand, managers arranging exchanges with other enterprises are often pictured as at best seeking an easy solution to the problem, and at worst as people

engaged in wheeling and dealing. The non-market innovation, autarky, is somewhat more acceptable than a limited market solution to the problems of supply.

3.3 Informal organizational responses to the discipline problem

Soviet enterprise managers are fighting low labor discipline with illegal material incentives. While ignoring the majority of their personnel as drunkards, shirkers, and bunglers, and paying them exactly what the law demands, managers resort to numerous extralegal tricks to stimulate the labor activity of a few conscientious workers. Their attitude toward the majority of workers is reflected in the famous Zaslavskaia report:

> Low levels of labor and productive discipline, an indifferent attitude toward the work performed, low quality of work, social inertia, a low level of importance given to labor as a means of self-realization, a strongly pronounced consumer orientation, and low levels of morality are traits common to many workers, which have specifically affected recent five-year plans. It is enough to recall the broad scale activities of the so-called "pilferers," the spread of all sorts of "shady" dealings at the public expense, the development of "illicit" enterprises and figure finagling and the "worming out" of wages regardless of the results of work.[92]

Broad use of payments for overtime is one form of extralegal remuneration. Rush work, or storming, involving working overtime and weekends, has long been known to plague Soviet industry.[93] It has been

generally considered solely as a means of plan fulfillment. However, storming also increases workers' incomes and thus keeps them at the enterprise. Smooth work during the month that would not require overtime would significantly lower workers' wages and increase labor turnover.[94]

Temporary transfer of workers from one sector of the economy to another, usually on orders from the local party organs, is an innovation that has been spreading widely. The transfers send workers from sectors with tighter discipline to those where discipline is relatively lax.

College students had been occasionally sent to participate in labor-intensive farm work, especially harvesting. This practice was extended to white-collar workers and high school students in the cities, and later also to blue collar workers. Gradually, all types of employees got involved in this kind of work in the countryside and in vegetable storage facilities in the cities, as witnessed by folklore and *belle lettres*. One of the songs of the immensely popular actor/author Vladimir Vysotski is about the Soviet Einsteins and Newtons who are invited by agricultural workers to join them in digging potatoes. The popular movie, "Garage" (1979) used the well-known joke about a professor who put his card in each bag he filled with potatoes. The hero of the movie, a leading scholar in a research institute, ironically justifies this by saying that since he is so highly paid, he is particularly responsible for every potatoe he puts in the bag. Part of the action in Alexander Zinoviev's *Zheltyi dom* takes place at a farm where philosophy institute employees were sent to work.[95]

The rhetoric behind the transfer of workers is the assistance to agricultural production. The city organization is called the patron (*shef*) of the farm. These relationships are often long-term; i.e., the city workers are sent to the same farm each year, but

this is not universal. A certain city district may also be a patron of a particular rural district. In this case, city workers may be sent to different farms, depending on need.

The practice has spread in recent years. In 1965, one-half million man-years were worked in agriculture by temporary non-agricultural personnel; in 1981, the average number of such annual workers in agriculture had reached 1.4 million. This represents an increase from less than 2 percent of all agricultural labor in 1965 to 6 percent in 1981. In some regions, this share is much higher, reaching 20%.[96] Two million students from colleges and technical schools are being sent annually to the farms, with an average stay of 43 days.[97]

Construction, followed by other industries (e.g., municipal services such as cleaning streets), joined agriculture and vegetable storage in seeking the patronage of other sectors. One should note that we observe here a practice that has long gone on within enterprises. It is common practice in many industrial enterprises to send white collar workers to do production tasks at various times: to work on the assembly line; polish those products destined for export; or help at a construction site.

While city workers are employed at their patronage jobs, their main jobs are left unattended, with all the associated losses. Sometimes the consequences are catastrophic, as with high school education in Central Asia, where pupils spend a considerable part of the school year harvesting cotton.[98] This patronage system influences the employment policies of Soviet enterprises. Managers try to pad their payrolls so that reserve workers can be sent to do agricultural work without disrupting the execution of the enterprise's own plan. This, of course, exacerbates the already grave labor situation.[99]

The patronage system represents a denial of the division of labor, just as does autarky. City dwel-

lers sent to do agricultural work are not good at it, and perform even the simplest tasks less productively than agricultural workers. It is commonly observed that as urban workers are being brought to the farms, farm workers are going to the cities to go shopping.[100]

Patronage presents the most graphic examples of irrational management and colossal losses to the economy. People arriving for a working day at a farm often have neither work nor implements allotted to them. They often work half a day, or just a few hours. If anything edible is being harvested, people load bags with it to take home.[101] All too often, upon arriving at the farm, people are confronted with such sights as potatoes they had harvested a month ago still lying in the field, rotting in the rain.

Enterprise managers are divided in their attitudes toward patronage. Not surprisingly, managers of agricultural and construction enterprises are advocates of this arrangement. Given the low motivation of their current labor force, they cannot cope with their tasks and see the temporary transfer of workers from other sectors as the only way to maintain their productivity. Directors of industrial enterprises, with their relatively better organized production and more highly motivated labor force, are consistent enemies of patronage, along with managers of educational, scientific, and other urban organizations. Soviet scholars also argue against patronage, as a demoralizing practice aggravating the problems of the Soviet economy.[102]

Regional managers are the most active supporters of the practice of patronage. They see in it not only a way to help out some of the enterprises in their region, but also as a way of legalizing their manipulations of the regional labor force, which in turn enhances their power. Central managers are divided along the same sectoral lines as enterprise

managers-- those benefitting or suffering from the practice. The political elite is aware that patronage is a manifestation, along with autarkization, of grave flaws in the Soviet economy. For this reason, the Soviet rulers have never touched on the topic in their pronouncements or official documents. This silence is a sign of tacit approval of the practice as being indispensable, given the current state of the economy. This is also reflected in the treatment of patronage in the mass media. While the most egregious cases of waste are castigated, the phenomenon itself is considered to be normal. A recent article recounted the experiences of a trucking enterprise, a calculator plant, and other enterprises that were obligated to build housing in the villages; the only thing that was considered wrong with the situation was a lack of construction materials.[103]

4. Conclusion

The five groups of managers analyzed in this report each have distinct and, in many cases, different attitudes toward organizational innovations. The political elite is interested in organizational innovations to enhance its image and to improve economic efficiency. At the same time, the political leaders loath any radical decentralization of the economy, since this may endanger their hold on power. There is a potential tension among the elite between the desire to keep their power intact and to improve economic efficiency.

In the short run, the regime's ability to insulate the political structure from the consequences of economic failures, the predominance of political criteria in the worldview of the elite, and the ability to marginally improve the existing economic organization will most likely foreclose the option of market economic reform. However, the leadership will

continue tolerating and partially legalizing informal economic activities, that is, slow creeping decentralization of the economy from below.

Central managers are the most conservative group, favoring few organizational innovations except for those that promise to increase their power, because their social standing is very sensitive to changes in economic organization. Regional party officials share the political elite's fears of decentralization. On the other hand, like every other group, they favor anything that gives them more power, and for this reason they support devolution of economic decision-making from the center and sectoral ministries to the territorial units. Since both the central managers and the regional managers are generally oriented against innovations, and since these groups serve as the executors of organizational innovations decreed by the political elite, innovations that run against the interests of these groups have a high probablity of being turned into hollow ritual.

The most innovative group is the enterprise managers. While this characterization is true only for part of the group, this part is extremely important for it generates organizational innovations both within the legal framework and outside of it. The latter kind of organizational innovation is especially important, providing the economy with the flexibility necessary to survive, and may prove to be a way of slowly and relatively painlessly introducing the market into the Soviet economy.

We found that pursuing organizational change within the existing economic system improves economic performance and, in any case, creates a strong impression of improvement, which is as important for the rulers as actual improvement. Tinkering with the existing economic mechanism will continue to bring marginal economic and political payoffs, though it is

possible that these will be insufficient to outweigh other negative influences on the economy.

There appears to exist a way to introduce decentralization in a gradual fashion; through the growth of the informal economy. This is not as threatening to the power of the elite as, say, Hungarian-style market reform. The only things required from the rulers would be the toleration of the informal activities, gradual relaxation of restrictions on these activities and, possibly, legalization of some second and informal economy practices.

Organizational innovations in the informal economy are much less visible than the widely publicized formal economic reforms. Yet the former emerge as the more important both for the current performance of the economy and for its eventual transformation into a more decentralized system. Currently, the informal economy provides the flexibility needed to correct planners' errors so as to make planners goals attainable. It also represents a nucleus that may grow into a full fledged market, given time and some cooperation from the rulers. The informal economy exists and grows due to the innovativeness of enterprise managers. It also serves to train and educate managers in entrepreneurial ways, and in taking initiative and responsibility. It may be difficult to discern progress in the expansion of the informal economy since many of its activities bear a strong resemblance to the pre-capitalist economic order. An historical analogy that comes to mind is with the merchants and manufacturers working under feudal restrictions in the 18th century France who resorted to innumerable tricks to circumvent stifling laws. As Marxists say, it was the new socio-economic formation germinating within the body of the old. Organizational innovations that channel resources away from the control of central planning authorities may prove to be more than just devices to achieve the limited goals of the persons involved.

NOTES

1. For example, see Gustafson (1981, 13 and Ch. 10).

2. "There is a view abroad, however, that the range of alternatives considered in public discussion at least, is too narrow to score a significant advance." Berliner (1983, 350).

3. Similar views were voiced by Kushnirsky (1984, 43).

4. Thus, A. Birman (1980, 95) speaks of "the drastic gap between theoretical postulates of economic science and the dominant economic practice."

5. For example, see Pronina (1970, 59).

6. Grossman (1977, 25).

7. Illegal in this context means not only expressly prohibited by the law, but anything not expressly permitted by the law or any official rule or regulation; extralegal would have been a better term. Of course, there are many gray areas between the legal and illegal (Katsenelinboigen, 1978, Ch. 7). Katsenelinboigen (*Ibid*) and Grossman (1977) describe the legal status of different activities.

8. Grossman (1982, 100) introduced a term, "shadow economy," with approximately the same meaning as our "informal economy." However, he does not differentiate informal activities according to their goals (immediate personal gain or plan fulfillment). We think this distinction is crucial.

9. "The code of informal relations contains a number of 'truths' that help to smooth out the contradictions usually emerging between the word and the deed. It is a lubricant of sorts..." (Skripov, 1983, 143).

10. About the two-level concept of Soviet mentality, see Shlapentokh (1986).

11. Skripov (1983, 143).

12. Levikov (1984).

13. Skripov (1983, 147).

14. The literature tends to treat "reforms" (official organizational changes) and the "second economy" (unofficial changes) separately, though the two frequently are directed toward the same goals. Grossman (1977, 40) notes that the second economy constitutes "surrogate economic reform," but does not elaborate on this point.

15. As developed by Williamson (1975, Ch. 2).

16. A complete list can be found in Schroeder (1979 and 1983).

17. See: Gus, *et al.*, (1982); Prigozhin (1984, 58).

18. All-Union research institute on problems of organization and management of the State committee for science and technology in Moscow. Makarov (1983, 83).

19. Renamed the "department for improving planning and economic stimulation" in 1981; see FBI, An Analysis Report, 20 July 1982, 3-4.

20. V. Makarov (1983, 86-88).

21. Soviet writers tend to emphasize the similarity between organizational and technological innovations, and to gloss over the differences (Makarov, 1983, 82).

22. Medvedev (1983, 16).

23. For example, the centrally approved statute on bonus payments defines half a dozen conditions under which bonuses may be paid, and allows ministries to choose those of the listed conditions that suit their situation the best ("Osnovnye Polozheniya..." 1977, 58).

24. *Gudok*, April 29, 1982 and Feb. 10, 1983.

25. "Nuzhna...", (1983, 39-40.)

26. For more details on this, see Kontorovich (1983, 25-27).

27. See Amann, *et al*. (1977).

28. See Sutton (1968-73).

29. For example, see Mil'ner (1977). The organizational structure of the Kama truck plant was designed by Mil'ner's team.

30. The transfer of technology is also not free from problems of compatibility. The scale of the problem, however, appears to be smaller than with imitating organization across economic systems.

31. The first article on experiments in the social sciences appeared in 1966 (Ryvkina, 1966); see also Rzheshevsky (1975).

32. See Nikitin and Prigozhin (1983 and 1983a).

33. See *Pravda*, November 23, 1983 and January 18, 1984; Seliunin (1985, 178).

34. On this, see also Kushnirsky (1984, 42).

35. See also, A. Prigozhin (1984, 66).

36. See Greenslade and Schroeder (1977); Schroeder (1979, 336; 1983); Gustafson (1981, 5-6); Cooper (1983); Bornstein (1985, 23).

37. Starting with Weitzman (1976).

38. For example, see Veselkov (1983, 12).

39. Vasil'eva (1977).

40. According to Erving Goffman (1959), making a good impression on other people is an important part of everyday human activity.

41. See Zhebit (1983); Karapetian (1979).

42. Shlapentokh (1985).

43. Kushnirsky's (1984, 34-37) interpretation of the fate of the 1965 reform is in the same spirit as ours. See also Berliner (1983, 354).

44. For example, see Liberman (1969, 31-33).

45. Karagedov (1970, 2).

46. There were also pronouncements alleging a lack of payoff from computers, such as one by Railroad Minister Konarev ("Kurs na uksorenie tekhnicheskogo progressa." *Gudok*, July 13, 1985).

47. See Kushnirsky (1984) on the measures reversing the 1965 reform.

48. For example, see Levita and Erofeyev (1984).

49. In the early 1980s, more than 600 "local initiatives" were being put into effect in the country (Simonian, 1981, 158; see also Kozyrev, 1983, 17).

50. An English language account of a typical case involving quality control procedures is analyzed by Campbell (1972).

51. *Pravda*, July 24, 1983.

52. *Pravda*, Dec. 27, 1983.

53. See Kontorovich (1983a) for sources and details.

54. See Berliner, 1976.

55. See Gustafson (1981, 135-136) for a list of different ways to do this. "Conservatism and departmental egotism

have elaborated many ways to imitate innovations and to pretend to implement them, using the fashionable term 'creative application'", Prigozhin, 1984, 60).

56. For reasons explained by Grossman (1963).

57. Depending on the source one cites.

58. Schroeder (1979, 334).

59. Kozhevnikova (1984, 11).

60. Although it also turns into a ritual (Popov and Shcherbakov, 1984), it appears to clash with the economic system in so much as enterprise management is held responsible for the work of the enterprise, but has to relinquish its control over the enterprise's resources by permanently assigning them to brigades.

61. Batalin (1984).

62. Komozin (1982, 113). Similar results were obtained by Sarno *et al.*, (1983, 98), and by Klimonov (1983, 139). For strong non-survey evidence, see D. Valovoi and A. Nikitin, *Pravda*, Nov. 23, 1983. See also D. Valovoi, "Contract," *Pravda*, Sept. 12, 1983.

63. *Pravda*, May 15, 1983, pictures the Ministry of Ferrous Metallurgy as being besieged by uncounted representatives of customers trying to get metal supplies from the ministry.

64. See also the surveys of managers in *Ekonomika i organizatsiia promyshlennogo proizvodstva*, no. 5, 1984, 34-62; "Opyt...", 1983.

65. For example, see Grossman (1982, 105-107).

66. Ericson (1981, 21).

67. Lardy (1984, 17).

68. In fact, division of labor is what gives rise to economic organization. See Knight (1933, Introduction).

69. Kheinman (1980, 46).

70. Alexander (1970, 9).

71. Seliunin (1981, 180-182).

72. This is based on Mr. Korsunsky's essay.

73. Kheinman (1980, 44). The first machine-building sector consists of machine-building ministries, and the second consists of machinebuilding plants under non-machine-building ministries.

74. Zelenskii and Ivanov (1983, 76).

75. "Chto ...", 1984, 3.

76. *Krokodil*, no. 9, 1984, 4. On the production of machine tools for one's own use, see Krichevsky and Prokhorchik, 1983. Their article is characteristically entitled "Making machine tools for one's own use is difficult and expensive."

77. Based on Mr. Korsunskii's essay.

78. Mr. Korsunsky notes that, in general, there is no cooperation among territorially close units of the same ministry, except when they are responsible for parts of the same construction project.

79. *Pravda*, Feb. 14, 1983.

80. *Ibid.*

81. See Sungorkin (1983).

82. "Pervye...", 1984, 125.

83. "Chto ...", 1984, 3.

84. The attitudes of ministries toward barter may well be different. According to one of our respondents, while the ministry was happy that enterprises resolve their supply problems by themselves, it preferred that items be bartered within the ministry, and not with "outsiders."

85. "Chto ...", 1984.

86. Bachurin (1984, 88).

87. Ikonnikov and Krylov (1984).

88. See, for instance, a strong condemnation of autarky by Bachurin, a leading figure in Gosplan (Bachurin, 1984).

89. For example, Gorbachev's speech, *Pravda*, June 27, 1985, 1.

90. Zhigalov, Sabirov, and Chekalin, *Pravda*, Feb. 14, 1983.

91. Sungorkin (1983).

92. Zaslavskaia (1984, 40).

93. See Berliner (1956).

94. See the review of letters to the editor in *Literaturnaia Gazeta*, Feb. 2, 1983, 13.

95. This practice is, of course, reminiscent of Castro's sugar cane harvesting campaigns which mobilizes much of the adult population.

96. Guzhvin (1984, 53).

97. *Komsomol'skaia pravda*, Aug. 28, 1984.

98. *Pravda*, May 12, 1984 and June 4, 1984.

99. Bazhenov (1984, 12).

100. See Nosov, (1984).

101. See Novopliansky, (1984, 3).

102. See Bazhenov (1984), and also *Literaturnia Gazeta*, 1978, nos. 2, 6, 11, 30; 1982, no. 15; 1983, nos. 4, 35, 52.

103. "Ctoby steny slozhit ...", *Pravda*, Nov. 1, 1985.

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