

**THE SCIENTIFIC-TECHNOLOGICAL REVOLUTION IN THE
SOVIET UNION : A STUDY OF ITS IMPACT ON
THE SOVIETS AND THE CPSU (1959-1980)**



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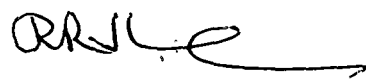
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C E R T I F I C A T E

Certified that the thesis entitled,
"The Scientific-Technological Revolution
in the Soviet Union: A Study of Its Impact
on the Soviets and the CPSU (1959-1980)",
submitted by Bankim Bihari Bhagat for the
award of the Degree of Doctor of Philosophy,
is a bonafide and original work to the best
of my knowledge, carried out by him under
my supervision and guidance.


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PREFACE

The Soviet Union continues to be the most controversial social order in the world. Social sciences have always tried to come to grips with the 'Soviet Reality'. Soviet political system in particular was an enigma to the non-Soviet scholars till a few decades before. The dominant model(s) in those days almost prevented any indepth inquiry into a non-Western political system. In recent times, however, new assumptions, concepts and methodology have been evolved to unmask the 'totalitarian' model in favour of more open and receptive models. Today it is almost universally accepted that the Soviet society is as dynamic as any other in the world. In some respects, even more development is seen in all spheres viz. social, economic and political; each interacting with and influencing the others.

This thesis is another attempt to investigate into a few aspects of the dynamics of social, economic and political life of the Soviet society in relation to what is known as the 'Scientific-Technological Revolution' (STR).

The special emphasis and main purpose of this study, however, is to inquire into the growth or otherwise of political participation in terms of the development of two specific but important institutions, namely the CPSU and

the Soviets. In so far as their developments in a socialist society reflect the need to involve more and more people in decision-making process at different levels and in different forms and vice versa, positive findings of either may lead to the existence of the other. This study, indeed, comes out with positive conclusion to this effect. In this process, it critically examines various dominant facts, concepts and analyses related with the Soviet political system.

Though this study is based on the Marxist method of analysis, its sources are not confined to books and articles written from Marxist approach or to Soviet sources only. In fact, some of its findings are derived from the works of Western scholars.

The study does suffer from one limitation. It is based on sources available in India, for reasons beyond my control. Neither the University Grants Commission nor the Union Education Ministry has yet resumed the earlier practice of arranging visits by the research scholars of my Centre to the Soviet Union. I only hope that it is restored in the immediate future to the benefit of scholars as also to that of the social sciences.

I sincerely express my gratitude to my Supervisor, Dr R.R. Sharma, Associate Professor, Centre for Soviet and East European Studies, School of International Studies, Jawaharlal Nehru University, who helped me in selecting this

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Finally, my indebtedness is not minimal to many of my friends and colleagues who, directly or indirectly, at one time or the other, provided me with substantial intellectual, material and moral support in the course of this study. Responsibility for any shortcomings in the study, however, rests with me alone.



New Delhi,

Bankim Bihari Bhagat

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C_O_N_T_E_N_T_S

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INTRODUCTION

Science is inextricably linked with the history of nature and of humanity. The history of nature and that of humanity are unintelligible if divorced from one another. While it is possible to envisage a natural world prior to man's existence or indeed after man has ceased to exist, for men, these have no meaning. "But nature, too, taken abstractly for itself - nature fixed in isolation from man - is nothing for man."¹ In the same way, the history of humanity unfolds itself only within an objectively real world - a world of nature which is itself continuously changing through human actions.

What distinguishes human history from the history of nature is the fact that man has learnt to produce the means of his own existence. Hence, men also produce their own material life. This production takes place by man's acting upon nature, and it is through this practice that the social and natural worlds are changed. The very fact that human beings learn to be more productive, to objectify themselves, to create more materials makes it possible to

¹ K. Marx, Economic and Philosophical Manuscripts of 1844 (Moscow, 1974), p. 145, cited in Hilary Rose and Steven Rose, eds., The Political Economy of Science: Ideology of/in the Natural Sciences (London, 1976), p. 2.

establish actual new ways of living for by changing nature man changes his own nature.²

This first practice of acting upon nature springs from man's conflict with nature in order to survive. Knowledge is acquired from this conflict with, and action upon, nature. Science, i.e. natural science, is the form of knowledge of the natural world which developed in the specific historical context of capitalism.³

Since scientific knowledge is both achieved in the practice of transforming of nature and itself becomes an agent in the transformation of human nature, its development goes hand in hand with the changes in the mode of production, first with handicrafts and then with industry.

At the early stages of history, man exerted the main influence upon nature through the various types of agricultural production. Man started to fell the forests, lay canals, build various irrigation structures and so on, exerting a fairly strong influence on the nature. The impact of various types of activity, like the handicrafts, the extraction of minerals, and building (with the origination of towns) on the environment was insignificant as compared

2 Hilary Rose and Steven Rose, "The Problematic Inheritances: Marx and Engels on Natural Science", in Rose and Rose, *ibid.*, p. 3.¹

3 *Ibid.*

with the cultivation of land for farming and the use of household animals.⁴

The industrial revolution marked a significant stage in the development of capitalist production and enabled the bourgeoisie to create great productive forces. Industry for the first time came to subordinate agriculture both in technical and economic terms. Man began to exert his main influence on nature through industrial production, which vastly increased the potentialities both for man's transformation of nature and the productive power of human labour.⁵ Thus, "as pre-capitalist forms were transformed into capitalist ones, so empirical folkloric knowledge was transformed into the first phase of modern science".⁶

"Science, like capitalism, was a civilising force - within limits".⁷ For example, the Galilean discovery in cosmology destroyed the Ptolemaic model of an earth-centred universe neatly ordered by God. Later, Darwin made God redundant from the creation of life and of humanity. Science, as critical knowledge, thus liberated humanity from the bondage of a superstition which elaborated

4 Pyotr Fedoseyev, "Man and the Scientific and Technological Revolution", Social Sciences (Moscow), vol. 9, no. 1, 1978, p. 29.

5 Ibid., pp. 29-30.

6 Rose and Rose, n. 2, p. 4.

7 Ibid.

into the thought-system of religion, had acted as the key ideological prop of the outgoing social and economic order. This was natural, since the mode of production founded on capitalism requires such continuous innovations in all spheres of life: the creation of new objects, new ideas, new technologies and new social forms; it requires 'the development of the natural sciences to their highest point'.⁸ Drawing attention to the growing role of science in capitalist production Marx put forward the proposition that as machine production advances and is transformed into a sphere of the technological application of scientific knowledge science becomes a direct productive force.⁹ Under the mechanical mode of production, he wrote, "practical problems arise for the first time which can be resolved only scientifically. For the first time experience and observations - and the imperative needs of the process of production itself - have reached a scale which allows for and necessitates the application of science".¹⁰ Thus "nature builds no machine, no locomotives, railways, electric telegrams, self-acting mules

8 K. Marx, Grundrisse (Harmondsworth, 1973), p. 409; cited in Rose and Rose, n. 2, p. 4.

9 Science plays twin roles in capitalist systems: as a direct force of production and as a means for social control - for the maintenance of the capitalist order. See Hilary Rose and Steven Rose, "The Incorporation of Science", in Rose and Rose, n. 1, p. 14.

10 K. Marx, Capital (Moscow, 1971), vol. 3, p. 81.

etc. These are the products of human history...."¹¹

But capitalism contains within itself a principal contradiction which limits its civilising process, and by doing so, it builds up an irresistible force for capitalism's own destruction. This contradiction is between labour and capital.

Science too shares in this general contradiction. It does not stay in the Galilean/Darwinian manner and not continue as a force for liberation. Under capitalism, nature becomes denatured, humanity dehumanised; and science is integral to both these processes.¹² For, under capitalist mode of production, as the material wealth grows, the worker finds himself increasingly devalued, alienated from what he produces, from himself, and from his fellow human beings. Thus, he may build a luxury flat, but he himself is ill-housed or even homeless, so that what he creates with his own hands appears as a hostile alien object, belonging to others, not to him. In fact, the worker is alienated from production, and indeed, in the very act of production, since he does not work because he feels the need to work but in order merely to survive. Science plays an integral part in this process of the alienation of labour.¹³

¹¹ Marx, n. 8, p. 706; cited in Rose and Rose, n. 2, p. 4.

¹² Rose and Rose, n. 2, p. 5.

¹³ Ibid.

Non-Marxist historians, philosophers and sociologists of science have presented a paradigm of 'pure science' divorced from 'technology'. This is true to the bourgeois culture which sees things and processes in isolation and in separation from each other and not in their unity. Marx basing his analysis on the dialectical method discovered the indivisibility and unity of modern science and technology. The particular character of modern science ushered in with the Galilean revolution is precisely that it is directed towards experiment, use, and technology itself; it is this which distinguishes modern science from the science of Greece, Babylon or India. The modern production of scientific knowledge is predominantly through the method of experiment, inherently committed to acting on the natural world, in order to understand and control it. The argument presented here is not that there is no science without a social function, but that the dominant mode of production of scientific knowledge has social functions.¹⁴

Natural science has invaded and transformed human life all the more through industry¹⁵ which is revealed by the specific technological forms which industry employs.

14 Rose and Rose, n. 9, pp. 19-20. In the pre-modern science, science was on a par with other intellectual and aesthetic activities such as music or poetry. See *ibid.*, p. 20.

15 "Industry is the actual historical relationship of nature, and therefore of natural science, to man." [Emphasis in the original.] Marx, n. 1, p. 97, cited in Rose and Rose, n. 1, p. 6.

Thus it is not only science in a general sense incorporated into the production process but also technology as a means of the development of productive capacity, which intensify human alienation (although they simultaneously prepare the grounds for its dissolution through the intensification of class-struggle) under capitalism and make the worker a mere appendage to the machine. It is in fact modern industry which makes science a productive force distinct from labour and presses it into the service of capital.¹⁶

Science and Technology under Socialism

The socialist system or the first phase of communist society, as it has not developed on its own foundations and as it emerges from the capitalist society, is "in every respect, economically, morally and intellectually, still stamped with the birth marks of the old society from whose womb it emerges".¹⁷ Individual producers do not receive the equal amount of wages or goods. Each receives according to his labour (after deducting his labour for the common funds) not according to his needs. Since no private ownership of the means of production exists, under the altered circumstances, no one can give anything except labour and nothing can pass to the ownership

16 K. Marx, Capital (Moscow, 1954), p. 335.

17 K. Marx and F. Engels, Critique of the Gotha Programme, Selected Works (Moscow, 1976), vol. 3, p. 17.

of individuals except individual means of consumption. To this extent, content and form of distribution of production under socialism is different from under capitalism. However, the same bourgeois principle of the exchange of commodity-equivalents operates under both the systems: a given amount of labour in one form is exchanged for an equal amount of labour in another form.¹⁸ This equal right on the surface which recognises the right of the producers proportional to the labour they supply and adopts an equal standard of measurement, i.e. labour, in fact, results with an unequal right. For, labour, to serve as a measure, must be defined by its duration or intensity; since one man is superior to another physically or mentally and so supplies more labour in the same time or can work for a longer time, the former receives more for his labour than the latter. Thus, equal right is an unequal right for unequal labour. What is involved here is not class differences, because everyone is only a worker like everyone else, but unequal endowment and thus productive capacity as natural privileges among the workers. Further one worker may be married, another not; one may have more children than other, and so on and so forth.¹⁹ "Thus, with an equal performance of labour, and hence an equal share in the social consumption

¹⁸ Ibid., p. 18.

¹⁹ Ibid., pp. 18-19.

one will in fact receive more than another, one will be richer than another and so on. To avoid all these defects, right instead of being equal would have to be unequal."²⁰ But since right can never be higher than the economic structure of society and its cultural development conditioned thereby, the above defects are inevitable in the first phase of communism which has just emerged from the capitalist society.²¹

Only in the higher phase of communist society, after the enslaving subordination of the individual to the division of labour and therewith also the antithesis between mental and physical labour - one of the principal sources of modern social inequality²² - is vanished; after labour has been transformed into life's prime want; after the productive forces have developed tremendously along with the all-round development of the individual, and "all the springs of cooperative wealth flow more abundantly - only then can the narrow horizon of bourgeois right be crossed in its entirety and society inscribe on its banners: From each according to his ability, to each according to his needs!"²³

20 Ibid., p. 19.

21 Ibid.

22 V.I. Lenin, "State and Revolution", Collected Works, vol. 25, p. 468.

23 Marx and Engels, n. 17, p. 19.

Under socialism just as it emerges from the old society, it is not yet possible fully to satisfy the historically conditioned needs of the individual since the development of productive forces and labour productivity have not yet reached a level high enough to make it possible to introduce communist distribution. But in every socialist revolution, after the proletariat has solved the problem of capturing power, has converted the means of production into public property, has expropriated expropriators and suppressed their resistance, the conditions are immediately created for the productive forces to develop to a tremendous extent, and in this connection (and for this purpose) for securing better organisation of labour.²⁴

Science and technology play the vital part in both the consolidation of socialism and laying the material and spiritual basis for the creation of communism. They are the main sources of the growth of productive forces and better organisation of labour. While dealing with the productive forces of socialist society and the role of science and technology in it, Bebel dwelt in particular on the use of electricity in industry and agriculture, on the importance of agrochemistry, the synthesis of organic substances and other outstanding scientific discoveries

²⁴ Lenin, n. 22, p. 468.

promoting a marked increase in labour productivity. Now since atomic energy, automation, telemechanics and electronics etc. have opened up new vistas for the increased development of productive forces and the transformation of the material and technical basis of man's existence, the scientific data cited by Bebel may appear outdated in the extreme, yet they are of major historical significance since they vividly demonstrate that conditions for a transition to socialism already existed at the end of the nineteenth century.²⁵

Although Bebel in course of his analysis of 'socialist' society was in fact mainly analysing communist society, his treatment shows a deep insight into major aspects of socialist and communist societies as also the manner in which science and technology develop there and contribute to the abolition of the antithesis between mental and physical labour, and between town and country, to the full spiritual and physical development of man.²⁶

25 T. Oizerman, "Preface", in August Bebel, Society of the Future (Moscow, 1971), p. 12.

26 Though Bebel committed certain mistakes in his analysis, a critical study of his work provides one of the best earliest Marxist literature dealing with the development of particularly a Communist Society. See *ibid.*, pp. 13-14.

CHAPTER I

THE SCIENTIFIC-TECHNOLOGICAL REVOLUTION AND SOCIAL STRUCTURE ; CONCEPT AND APPROACH

Section I

STR : Concept

Science is cognition of the laws that govern the objective world and that we obtain from practice and for practice; technology consists of the means of production which mankind creates and uses in its production activity; revolution is a radical leap in development. Thus revolution in science and technology entails a qualitative leap both in the cognition of the laws of the objective world, and in the creation and use of means of production.¹

In the entire history of human society, the development of knowledge and its application was a slow process. Such implements of labour as the wheel, the hammer, the lever, the spade and the millstone remained virtually the same for centuries and in the Middle Ages differed little from their ancient forerunners. It was only in recent times,

¹ A. Rumyantsev, "The Socio-Political Basis of the Scientific and Technological Revolution", in USSR Academy of Sciences and others, The Scientific and Technological Revolution and the Modern Society (Calcutta, 1970), p. 129.

particularly during the industrial revolution, when natural forces such as the wind, water and later steam began to be used and machines constructed that changes began to take place in the implements of labour.² Some implements of labour were transferred from the hands of man (metaphorically speaking) into the hands of the machine.

This was a qualitative leap in the development of technology which was also accompanied by a similar leap in science, because the transition to the machine demanded a vast extension in the knowledge of the objective world, nature and society. That is what constitutes the scientific and technological revolution "which took place at the end of the 18th and the beginning of the 19th centuries".³ This first scientific and technological revolution is known as industrial revolution.

The second scientific and technological revolution (STR, with which we are concerned in this study) which began in the middle of the twentieth century and is currently in progress, is characterized by a merger of two streams - the scientific revolution and the technological revolution - and marks a further qualitative leap in the reorganisation and

2 T. Khachaturov, The Economy of the Soviet Union Today (Moscow, 1977), chap. VII, "Scientific and Technological Progress and the Development of Socialist Production", p. 146.

3 Rumyantsev, n. 1, p. 129.

development of society's productive forces as a result of science's transformation into a key factor in the development of social production. The essence of the STR "consists of the reorganisation of the whole technological basis of, all the technology of production, beginning with the utilisation of materials and power processes and ending with the system of machines and with the forms of organisation and management, with the place and role of man in the production process".⁴ It creates "the prerequisites for bringing most vital forms of human activity into a single system: the science, i.e. a theoretical cognition of the objective laws of nature and society; technology, complex of the means of creating material wealth; management, the means of rational interconnection between expedient practical acts in the process of solving production and other problems".⁵

Marx discerned the embryo of the STR back in the middle of the nineteenth century when he noted that the scientific and technological revolution of the future would take place because of electricity.⁶ The study of its laws led to the most profound changes in the study of matter.⁷

4 D. Gvisshiani, "The Scientific and Technological Revolution and Progress", Social Sciences (Moscow), vol. 6, no. 3, 1975, p. 96.

5 Ibid., p. 97.

6 Marx cited in Romyantsev, n. 1, p. 130.

7 Ibid.

While formerly science used to be based on Newtonian laws, "today it has risen to the level of the laws being discovered on the basis of Einstein's theory of relativity, quantum mechanics, the new phenomena which give much fuller reflection to everything that has been discovered until now."⁸

The same is taking place in the sphere of technology where manual and semi-manual labour, and separate relatively simple machines mechanically connected with each other into shops and plants are giving way to automated systems of machines embracing the whole branches of industrial activity.⁹

The SIR is the result of the accumulated discoveries at the level of basic research, i.e. one directed towards gaining new knowledge of nature and new forms of the organisation of matter, since the beginning of the twentieth century in the fields of nuclear physics, of macromolecular chemistry, of cybernetics, biology and sociology.¹⁰ It is, however, cybernetics and automation that constitute the main components of the SIR. A distinction should be made between these two also in so far as the starting-point of the SIR was the application of cybernetics to industry as

8 Ibid.

9 Ibid.

10 Roger Garaudy, The Turning-Point of Socialism, Peter and Betty Ross, trans. (London, 1970), p. 21.

well as to strategic purposes. The industrial revolution of the eighteenth-nineteenth centuries had grown from improved methods of transforming and transmitting energy; the STR or the 'second industrial revolution', as it was called by the Western cyberneticists, grew from the superior means of transforming and transmitting information.¹¹

Cybernetics has been defined "as the science of control in the animal and the machine"¹² or as "the scientific analysis and control of animate or inanimate systems of organization, based upon their methods of communication".¹³ While emphasising the essential unity of all systems, cybernetics disregards apparent differences in the construction of men and machines, and stresses such obvious functional parallels as neural networks and electronic circuits.¹⁴

Thus, the first major assumption of cybernetics is that man, machine and society are very similar in structure and can best be understood and controlled through the study of their control and communication facilities. Secondly, cybernetics assumes that messages of control between man

11 Loren R. Graham, "Cybernetics in the Soviet Union", Survey (London), no. 52, July 1964, p. 4.

12 Gerald Segal, "Automation, Cybernetics and Party Control", Problems of Communism (Washington), vol. 15, March-April 1966.

13 Lee Kerschner, "Cybernetics: Key to the Future?" Problems of Communism, vol. 14, November-December 1965, p. 56.

14 Ibid.

and machine, machine and man, and machine and machine will play increasingly larger roles in society. Hence it considers as parallel not only the nervous system and communication machines but also all forms of behaviour to the extent that they are regular, determinate and reproductive.¹⁵

It is the newer computation machines with their ability to calculate, compute, retain in memory, react to environment, and select free alternatives on the basis of experience in short, to duplicate to a great degree the human system, which provide the background and basis for all current cybernetic activity.¹⁶

Cybernetics was first established as a separate discipline in 1948 by Norbert Wiener, the late mathematician associated with the Massachusetts Institution of Technology. The new discipline included such "subordinate" areas as automation, computer theory, programme learning, artificial intelligence, automatic data processing etc.¹⁷

Main Features of the STR

The main features of the STR are as follows:

- (1) Despite cross-fertilisation and dialectical relationships between technology and science, in the recent period,

¹⁵ Ibid., pp. 56-57.

¹⁶ Ibid., p. 57.

¹⁷ Ibid.

especially in the wake of the STR, the earlier relationships have been inverted and emphasis has been shifted from technology to science in their initial but integral development process. Until the middle of the twentieth century the demands of technology and production contributed the chief motivational factors in scientific progress. A classic example of this is the discovery of the highly abstract laws of thermodynamics at the beginning of the nineteenth century (the Carnot, Joule and Mayer principle) that resulted from research by engineers on the maximum programme of steam engines. This relationship was later inverted.¹⁸ Scientific progress became a motivational factor in the development of production which it precedes and leads on instead of following. Thus, Einstein's theories anticipated the utilisation of nuclear energy and the deployment of atomic technology. Cybernetics appeared on the scene before computers came into use. In other words, it is fundamental or "pure" research that paved the way for the scientific and technological revolution and provides scope to its development.

- (2) The STR has marked the establishment of much closer ties and much more rapid interaction between man's activity in cognising the deeper laws of nature and in

¹⁸ Garaudy, n. 10, p. 23.

producing socially useful goods. In the past, these two areas of human activity were completely or almost completely independent of each other. As a result, many decades elapsed between the appearance of a scientific idea and its industrial application. Recent scientific discoveries, on the contrary, have given birth to more advanced technological processes, new branches of industry and new lines of material production. Thus, nuclear research has contributed to nuclear power engineering, solid-state physics and high pressure physics, to semi-conductors, synthetic diamonds and other new materials which are revolutionising radio-engineering, radio-electronics and instrument-making. The coming closer of science and industry is also linked with what is known as 'applied research' which converts the new ideas and fresh knowledge about nature provided by science into the projects and designs for new devices, later to be realised in industry, transport, communications and other branches of the economy.¹⁹

- (3) Unlike in the past, when there was a long time-gap between the scientific discovery and its practical application, in the wake of the STR, the interval

¹⁹ M. Millionshchikov, "The Crucial Test for Mankind", in Robert Daglish, ed., The Scientific and Technological Revolution: Social Effects and Prospects (Moscow, 1972), p. 14; see also S. Trapeznikov, "Leninism and the Scientific and Technological Revolution", in *ibid.*, p. 57.

between discovery and its practical application is rapidly shrinking. Thus, it took 112 years (1727-1839) for the principle on which photography is based to be put into effect; 56 years (1820-76) for the telephone to emerge; 35 years (1867-1902) for radio communication; 15 years (1925-40) for radar; 12 years (1922-34) for television; six years (1939-45) for the A-bomb; five years (1958-61) for the integrating circuit to go into production and so on.²⁰

- (4) Owing to the unity and community of natural phenomena which are fundamental to both living and inorganic matter, the STR has brought about increased cooperation and interaction between different sciences in the course of research and its practical application. This is evident in inter-disciplinary titles of the sciences, e.g. bio-physics, bio-chemistry and so on. Cybernetics too expresses the contact between numerous sciences like mathematics, physics, chemistry, biology, economics and also computers etc. to develop the theory of control in diverse spheres of human activity.²¹
- (5) The STR is assuming a comprehensive nature because it brings about radical changes in all sides of industrial

20 Trapeznikov, *ibid.*, pp. 57-58.

21 *Ibid.*, pp. 58-59.

and agricultural production in the productive and non-productive spheres of the economy. However, a leading element signifying the highest stage in the development of the means of labour, can be singled out in it: the new revolutionary changes in the means of labour associated with the complete automation of electrified production. Modern automation opens up a new era in the development of machines. Automation during the days of steam-power and later could encompass only labour functions connected with the processing of subjects of labour and their shifting and setting into operation instruments of labour; it did not affect functions of operating and controlling machines and also memorising, selecting, calculating and processing information which still were to be done by man.²²

Commenting on the future prospect of automation Marx wrote: "As soon as a machine executes, without man's help, all the movements requisite to elaborate the raw material, needing only attendance from him, we have an automatic system of machinery, and one that is susceptible of constant improvement in its details."²³

22 Y. Borisov, "Politico-Economic Problems of the Contemporary Scientific and Technological Revolution", in USSR Academy of Sciences, n. 1, p. 42.

23 Karl Marx. Capital (Moscow, 1954), vol. 1, p. 402.

The substance of modern automation and cybernisation of production is linked with the creation of sensory-reflectory automatic devices which, with the help of a feedback, can exercise, instead of man, control of a manufacturing process in accordance with a pre-set programme. Thus the STR while bringing about qualitative changes in the traditional elements of a machine complex - motor, transmission and working machine - also introduces a new element - an automatic controlling device. "The last function of man's direct participation in the production process - control, regulation and management - is transferred to a mechanical device."²⁴ This implies a change in the nature of interaction between man and machine.

As a result of the complex automation of production and management and the creation of scientific and technological means for carrying out mechanical as well as logical operations, the character of the work and functions of persons engaged both in the sphere of production and movement of tangibles and in the non-production sphere have radically changed. Increasing demands are made on their qualifications and on the quality and scope of their knowledge. The emerging changes in the sphere of mental labour may be broken down into two principal factors:

24 N. Gausner, "The Scientific and Technological Revolution and the Social Structure of Capitalist Society", in *Daglish*, n. 19, p. 190.

sensory-mental activity with respect to monitoring, management, and observation of production processes, and the treatment of problems of science and technology in theory and practice. The former factor involves performance of mental operations by combining experience in production and technical knowledge. The latter signifies the theoretical aspect of mental labour, involving thought and logic. The significance of the theoretical factor in an individual's work, under the conditions of the STR, rises as a consequence of his assimilation of the scientific method of thought and his ability to make use of the achievements of the STR. The new equipment and production technology, based as it is on computerization, involving the integration of the achievements of today's natural sciences on the basis of mathematical methods, information and control theory, urgently demand replacement of empirical thinking by a scientific one.²⁵

As man is released from the need to perform manufacturing, motive, transport, control and logical functions, and as a fundamentally new, automatically operating system of machines is created, a radical change in the position of man in production occurs and the whole system of the division of labour is transformed.

25 I.S. Puchkov and G.A. Popov, "Sociodemographic Characteristics of Science Personnel (Part I)", Soviet Sociology (New York), vol. 16, no. 3, Winter 1977.

The most important social effect of these changes brought about by the SIR has been, of course, the growth of productive forces. Notable, however, is the fact that it has created the material and technological conditions to overcome substantial differences between mental and physical work in agriculture and industry, between town and country, between production and non-production spheres. It has influenced all aspects of life in the present-day society, including education, culture, the psychology of people, and the relationship between nature and society.²⁶

Approach to the SIR

The essence and historical importance of the SIR can be determined with adequacy only on the basis of a comprehensive and synthetic approach in asserting it in direct connection with the fundamental social process. It was the Marxist social thought which first gave a theoretical interpretation of the SIR and of the social and economic processes connected with it. The concept itself was put forward by Marxists in the 1950s following a big leap forward made in scientific knowledge and its technical application. This phenomenon was described by the Western sociologists as the "second industrial revolution" meaning thereby

26 P. Fedoseyev, "Social Significance of the Scientific and Technological Revolution", Social Sciences, vol. 6, no. 3 (21), 1975, p. 84.

"actually only the modernisation, albeit a very radical one of the technical basis of large-scale industrial production".²⁷ The Central Committee of the CPSU in its documents of the plenary meetings of July 1955 used the term "scientific and technological revolution" to define the whole complex of new phenomena and processes associated with the unprecedented and rapid progress of science and technology and its results.²⁸

The main feature of the Marxist interpretation of the STR consists in recognising the fact that social revolution corresponds to the revolution in spiritual and material production. The mainsprings of any social revolution are the contradictions in the development of social production - between the productive forces and the relations of production. Marx showed the interconnection between revolutionary changes in production and revolutionary transformations in the social structure. He pointed out that once a revolution has taken place in the productive forces, which is a technological revolution, there also takes place along with it a revolution in the relations of production. He, at the same time, explained the fact that the revolution in production relations is not the automatic outcome of the revolutionary development of the productive

27 Ibid.

28 Ibid., p. 83.

forces but the outcome of the struggle of progressive classes (for instance, in contemporary history, the working class) against the obsolete social system.²⁹ While analysing the industrial revolution of the 18th-19th centuries, Marx and Engels elaborated its connection with the series of social revolutions that marked the formation of the capitalist mode of production. Thus, industrial revolution followed a social revolution. For instance, in Britain it followed the bourgeois revolution of the seventeenth century.³⁰

The dialectics of the epoch of the SIR is expressed in the fact that in a number of countries the socialist revolution preceded the SIR thereby ensuring the necessary conditions for the latter. On its part, the SIR has been providing the means for developing and multiplying the achievements of the social revolution. In the capitalist countries, the SIR precedes the social revolution, preparing its material premises and giving greater depth to the fundamental contradictions of capitalism. The revolution in the productive forces in both the systems helps to build up the new material and technical basis which increasingly approximates the "communist mode" of production.³¹

29 Ibid.

30 V. Marakhov and Y. Meleshchenko, "Specific Features and Social Consequences of the Scientific and Technological Revolution", in *Daglish*, n. 19, p. 152.

31 Pyotr Fedoseyev, "Man and the Scientific and Technological Revolution", *Social Sciences*, vol. 9, no. 1, 1978, p. 17.

It is the position of the working people in production and in the system of its relations that most sharply reveals the basic differences between the processes of the STR in the two different and opposite social systems.³²

The basic premise of this analysis is the fact that people with their experience and knowledge, with the historically determined forms of their labour cooperation constitute the principal productive force and that technology is materialised labour. Under capitalism, this materialised labour is alienated from the producers, becomes a means for alienating labour, and makes the latter an appendage of technology. Under socialism, since the aim of production is completely different, man while retaining his importance as the main productive force, uses materialised labour for his further development and thus ceases to be a means of production and an appendage of technology.³³

Approximately, from the last half of the nineteenth and the early twentieth centuries, the development of the productive forces had been leading at an increasing rate to the ouster of individual private enterprises and their being replaced by big industrial, trading and financial corporation, and the state economic sector. While on the technological plane, the growth of productive forces necessitated the

32 Fedoseyev, n. 26, p. 85.

33 Ibid., p. 87.

increasing transfer of essentially technical production processes from man to machine, on the socio-economic plane, it demanded the socialisation of production. This, in turn, created the conditions for the rapid development of such a component of the productive forces as science, because at the monopolistic stage of capitalist development "the process of technical invention and improvement becomes socialised".³⁴ The high degree of concentration and centralization of the economy has determined the growing scale on which science has been applied in material production and subsequently, in what is called the "industrialisation of scientific research and experimental and design work".³⁵ Ever since then the introduction of new technology has served as the principal means for developing the productive forces. As a result, technology has become not merely materialised human labour but materialised scientific knowledge. All this has led to radical changes in the relationship between science, technology and production and to the creation of giant scientific-technological and industrial complexes.³⁶

It is at this level that the evolution of the relationship between science and technology has resulted in the introduction of scientific discoveries in industry at an

34 V.I. Lenin, Collected Works (Moscow, n.d.), vol. 22, p. 205; cited in *ibid.*, p. 87.

35 Fedoseyev, n. 26, p. 87.

36 *Ibid.*

unprecedented rate and scale. When isolated private industries prevailed, when scientific quests were the concern of individuals lacking the necessary production facilities, the scientific discoveries were slow and it took decades to apply them on a large scale. With the industrial enterprises framing the base for technological application of science, having been amalgamated and centralised, the application of scientific discoveries in industry have been more and more faster.³⁷

The evolution of relationship between science and technology, and production is evident in the growing connection between the appearance of new fundamental scientific discoveries and the emergence of such major branches of modern industry as the peaceful atomic energy, the development of computers and space exploration, etc.³⁸

The STR has thus concentrated more and more capital into a few hands and the working people in these monopoly industries have remained in the same position as before - the slave of capital and modern machines and technology. The production relations in developed capitalist countries, like the USA, cannot correspond to the new level and nature of productive forces within the existing capitalist mode of production where the socio-economic relations have already

37 Ibid., p. 88.

38 Ibid.

grown obsolescent,³⁹ Complete socialisation of production⁴⁰ in the wake of the STR demand the replacement of the capitalist mode of production by the socialist mode of production. Without this we find only some evolutionary changes in the prevailing production and class-relations which proceed within the bounds of capitalist property.

Thus, the emergence of a group of technologists does not bring about any major change in the class-structure of the capitalist society. The assertion of some theorists that the capitalists, the owners of the means of production, are gradually being replaced by technologists in leading positions in economy and politics is erroneous. Major decisions in all capitalist countries are made by the business, the government, the army or various pressure groups and the technologists merely carry them out though sometimes at a very high level.⁴¹

Similarly, to say that owing to rise in the standard of living in the wake of the development of technology and productivity, capitalism is being transformed into class-

39 Despite the obsolescent production relations, the productive forces in the capitalist countries will grow till the former have become fetters on the latter's development.

40 Socialisation of production is partially manifested in the concentration of finance capital, in the setting up of large monopolies, trusts, syndicates etc. See Marakhov and Meleshchenko, n. 30, p. 152; also see Rumyantsev, n. 1, p. 131.

41 Garaudy, n. 10, p. 34.

less society is equally erroneous. There has not been any real change in the unequal distribution of incomes. In the United States of America, where the STR is most advanced among all the capitalist countries and where the income per capita is highest, inequality is glaring. "At the top, 20 per cent of the population share 46 per cent of the total income, at the bottom, the least fortunate section, 20 per cent share only 4.6 per cent".⁴² This disparity reflects a radical distribution between those who own the means of production and profit by the surplus value and those who have nothing to sell but their labour-power and who produce surplus value for others.⁴³

In socialist society, on the other hand, where public ownership of the means of production prevails, production relations on the whole correspond to the productive forces and the demands of the STR are met through economic reforms, without any basic change in the foundations of the prevailing mode of production.⁴⁴ In fact, here also the new production relations arise and its impact on social structure depends on the stage of socialism in a specific socialist country. Socialism is not without classes and without other contradictions which may not be essentially class-contradictions. Hence,

42 Ibid.

43 Ibid.

44 Borisov, n. 22, p. 40.

in general terms, if there is contradiction between, for example, peasantry and the working class, town and country, mental and manual labour and so on, the STR would help in resolving them through "workerisation" of the peasantry, through raising the income and skill of classes and groups, through the reduction of working hours, through the raising of cultural standards etc. In other words, the STR under socialism, by raising the production and the productive forces, and consequent transformation of the social relations, paves the way for the "communist mode" of production.

Section II

Social Structure

Social structure is one of the fundamental categories in the sociological analysis. It designates a system of human relationships, distances, hierarchies in both an organised and an unorganised form. In contrast to such 'microstructures' as a family structure, which is a system of relationships between particular individuals, social structure treats whole groups or categories of individuals, as elements of the social system.⁴⁵ The

⁴⁵ Stanislaw Ossowski, Class Structure in the Social Consciousness, Sheila Patterson, trans. (London, 1969), pp. 10-11. He considers 'human relationships' both as the relationships that result from power relations and those that result from the division of functions. Ibid., p. 11.

latter is concerned with the principal forms of social organisation, i.e. types of classes, groups, associations, institutions and the complex of these which constitute societies, as well as with the mode of division of labour and the forms of social action.⁴⁶

The concept of social structure is wider than that of class-structure, since the groups as elements in social structure need not be social classes. They could, for instance, be age categories (e.g. children, young people, grown men, elders) or ethnic groups or such organised groups as political parties or bureaucratic and church hierarchies etc. Class-structure, however, constitutes a particular and specifically important aspect of social structure.⁴⁷

All the students of social structure are agreed upon the fact that 'structure' means essentially the inter-relation or arrangement of parts in some total entity or whole and that the adjective 'social' specifies the character of that 'whole', which is society or any of its subdivisions and not 'culture' and any of its sectors or provinces.⁴⁸

46 S.F. Nadel, The Theory of Social Structure (London, 1969), p. 2; also see in A. Levada, "Social Structure", in Murray Yanowitch and Wesley A. Fisher, ed., Social Stratification and Mobility in the USSR (New York, 1973), p. 3.

47 Ossowski, n. 45, pp. 10-11.

48 Nadel, n. 46, p. 4.

Indeed, the economic, political, cultural and other structures of a society may be viewed as various and different aspects of its social structure. The Marxist approach to social development reveals the determining role of the system of economic relations, i.e. the economic structures, in relation to other societal structures, noting simultaneously the significance of the reverse influence of latter on the economic structure. The relations which determine the functioning of separate spheres or institutions of societal life constitute the social structure of production, politics, science, leisure and so on. Finally, social structure - more precisely, social composition - in terms of the distribution and quantitative interrelation of classes, of social groups, as well as of strata, professional, cultural and other groups can be correctly understood only in conjunction with the interrelations of appropriate institutions, spheres of society, and types of division of labour, i.e. only through the social structure of society as a whole.⁴⁹

The social structure of a society may be considered on three planes: first, the functional plane, i.e. as an ordered system of forms of social activity ensuring the functioning and development of a particular whole; the units of analysis here are distinct spheres of the social division

49 Levada, n. 46, p. 4.

of labour and social institutions; secondly, the organisa-
tional plane, i.e., as a system of relations forming
different types of social groups characteristic of a given
social system; the units of analysis in this case are
collectives, organisations and their structural elements;
and finally, as a system of orientation of social action
(collective and individual), the units of analysis in such
approach to social structure and the elements of social
action are roles, goals and means, motives and stimuli,
norms and standards, programmes and their elements etc.
All these approaches to the social structure of a society
may be considered as different cross-sections which
complement each other; each of them permits theoretical
and empirical analysis, although the degree and forms of
their correspondence to each other are not alike and make
fundamental differences.⁵⁰

The main concern of Western sociology, also known
as structural-functional sociology, has been the actions of
individuals and collectives (rulers, armies etc.). "Action
has an orientation when it is guided by the meaning which
the actor attaches to it in its relationship to his goals
and interests".⁵¹ That organised sector of an actor's

50 Ibid.

51 Talcott Parsons and Edward A. Shils, ed., Toward a
General Theory of Action (New York, 1962), p. 4.

orientation which constitutes and defines his participation in an interactive process is the "role". It is the "role" which is the most significant unit of social structure.⁵²

Roles differ in their specific goals and cognitive orientations and signify the need-disposition of different individual actors to social or non-social objects and on the basis of which they interact with each other and with the social system as a whole. The social system allocates facilities and rewards, i.e., power, prestige and income to fulfil the need dispositions of actors playing different roles. Since these facilities and rewards are scarcer in society, it is allocated in different amount to the actors and thus ensures the system of social stratification.⁵³

"...the structure of a society through abstracting from the concrete population and its behaviour the pattern or network (or 'system') of relationships obtaining 'between actors in their capacity of playing roles relative to one another'."⁵⁴

According to the structural-functional approach, societies and organised units within societies, i.e. groups, associations, institutions etc., have a structure or can be regarded as units displaying a structure. To exhibit the structure of an object is to mention its parts and the ways in which they are inter-related. In the structural analysis

52 Ibid., p. 23.

53 Ibid., pp. 196 ff.

54 Nadel, n. 46, p. 12.

in sociology in which the basic unit is the "role", i.e., a complex of behaviour expectations which are associated with a given social position or status, the human individual in the fullness of his expressions figures only as an incumbent of such positions and "player" of role. The relations between roles and their agglomerations around certain institutional spheres (occupation, education, family politics etc.) are expressed by the concept of function, that is to say, by their latent or explicit (manifest) consequences for the functioning of the total structure. Thus, the structure of a society, in such an approach, presents itself in its most formal aspects as a functional system the units of which are social roles and role sets.⁵⁵

Marxism on the other hand demonstrates the connection of social classes⁵⁶ with particular phases of

55 Ralf Dahrendorf, Class and Class Conflict in Industrial Society (London and Henley, 1976), p. 120.

56 V.I. Lenin gave an exhaustive definition of classes. "Classes are large groups of people differing from each other by the place they occupy in a historically determined system of production, by their relation (in most cases fixed and formulated in law) to the means of production, by their role in the social organisation of labour, and, consequently, by the dimensions of the share of social wealth of which they dispose and the mode of acquiring it. Classes are groups of people one of which can appropriate the labour of another owing to the different places they occupy in a definite system of social economy." See V.I. Lenin, "A Great Beginning", Collected Works (Moscow, 1965), vol. 29, p. 421.

the development of production and consequently reveals the functional structure (the division of labour and private property) which serves as the basis of the existence of the corresponding social groups. This also makes it possible to approach scientifically both the organisational structure of society and social action.⁵⁷

Since Marx's subject was social change and the category of social structure was no more than a tool to tackle this problem, his theory of class was not a theory of a cross-section of society arrested in time, in particular, not a theory of social stratification but a tool for the explanation of changes in total societies. "In elaborating and applying his theory of class, Marx was not guided by the question 'How does a given society in fact look at a given point of time?' but by the question 'How does the structure of a society change?'"⁵⁸ For him the concept of class was not 'static' but 'dynamic' not 'descriptive' but 'analytical'. He was mainly concerned with the analysis of certain laws of social development and of the forces involved in this process.⁵⁹

Marxist conception of social structure is dichotomic: a generalisation for the whole society of a two-term

57 Levada, n. 46, p. 4.

58 Dahrendorf, n. 55, p. 19.

59 Ibid.

asymmetric⁶⁰ relation in which one side is privileged at the expense of the other; society is divided into two correlative and diametrically opposed classes in such a way that each of them is characterised by the relation of its members to the members of the opposed class.⁶¹ This dichotomic division of society applies to slave-owning society, feudal society, capitalist society and even socialist society, but does not apply to primitive communal society or 'communist' society; since in the last two societies there is no private property and hence no exploitative division of labour - collective ownership of the means of production and an egalitarian distribution of products prevail.

While analysing a division based on the relations of ownership, i.e., rich and poor, the dichotomy usually clashes with the fact that there are gradations of wealth with a whole range of intermediate position. Similarly, if estate or caste privileges are taken as the principle of division, the clash with reality is apparent everywhere where the estate or caste hierarchy is not confined to the

60 This "asymmetric relation can assume three forms: first the relation of power, second the relation involving the exploitation of the labour of others and third the relation denoted by the expression 'rich and poor' or 'haves and have-nots'" See Ossowski, n. 45, p. 31.

61 Ibid.

division between freemen and slaves or between nobles and the ordinary people.⁶²

In the Marxian conception of social classes, conceived as groups determined by their relation to the means of production, there are three criteria of a dichotomic division. Two of them are particularly important: first, the ownership or non-ownership of the means of production; and secondly, the employment or non-employment of a hired labour force. The overlapping of these two criteria leads to, what Ossowski calls, a 'three-term system', through the separation of the class of those who own the means of production but do not employ hired labour and work themselves on it. This overlapping is not alien to Marxism. In any society characterised by oppression and exploitation of one class by another, the dominant antagonistic relation tends to conceal the existence of other groups and other conflicts from the major oppressed class. Thus, for the serf, society is composed, above all, of lords and serfs; for the industrial worker, it is composed of workers and capitalists. In order to emphasise those aspects of social structure that are most important from a class perspective, the knowledge of the existence of other groups is pushed on to the margin of awareness.⁶³ While noting the

62 Ibid., p. 32.

63 Ibid., pp. 33-34.

insignificance of the differentiation of a hierarchy of privileged classes from the view-point of the lowest class, Engels wrote:

In speaking of the bourgeois I include the so-called aristocracy, for this is a privileged class, an aristocracy, only in contrast with the bourgeoisie, not in contrast with the proletariat. The proletarian sees in both only the property-holder, i.e., the bourgeois. Before the privilege of property all other privileges vanish. 64

Moreover, in the periods of class-struggle, emphasis on the dichotomic conception of social structure and overlooking of the intermediate positions between the two contending classes "becomes an important propaganda factor for those whose strategy is best suited by the stressing of single front line".⁶⁵ While taking into account the contemporary reality of intermediate groups, Marx and Engels also postulated the polarisation of society in two classes as the outcome of further historical development. This also reinforced their dichotomic image of society in an era of class-struggle. Besides, in Marxist conception which conceives the diametrically opposed

64 F. Engels, "The Conditions of the Working Class in England", in K. Marx and F. Engels, On Britain (Moscow, 1953), pp. 310-11, cited in Ossowski, n. 45, pp. 34-35.

65 Ossowski, n. 45, pp. 34-35.

classes as the main component of social structure, the intermediate classes are less important and less enduring due to the fact that it is a typically marginal class and in course of sharp conflicts, it must join with one or other of the two opposite classes. Its existence, therefore, does not deprive the social structure of its dichotomic character but only blunts its sharpness.⁶⁶

The alternative to this dichotomic conception of social structure, i.e., the gradation of social groups on the basis of wealth, the amount of property or the size of a person's share in the national income, or the educational qualification does not provide any scientific enquiry into social structure and obliterates the basic units of social forces in it.

Marxist Approach to Social Structure under Socialism

In Marxist theory, the social structure of a socialist society is not marked by the absence of classes or strata and the social and economic inequality persists⁵ in it as a "legacy" from antagonistic social orders. Socialism, by liquidating private property, eliminates the consequences of private property, i.e., antagonistic classes but does not eliminate the original cause of social inequality: the

⁶⁶ Ibid., p. 39.

division of labour into socially heterogeneous types.⁶⁷ The totality of socialist production relations still contain elements that reproduce social and economic inequality. Due to the existence of social and economic heterogeneity of labour, the members of socialist society, socially attached to its economically different forms, have unequal opportunities to utilize the means of production, i.e. they participate unequally in the organisation and improvement of production and thus contribute unequally to economic and cultural development. They do not develop their abilities and talents to the same degree, nor are they equally the subjects of society's activity.⁶⁸

It is this social division of labour and the associated nature and degree of utilization of the means of production, the inherent commodity-money relations, the law of value that are responsible for differences under socialism between workers of different skills and complexity of labour, between personnel in mental and manual labour, between urban and rural residents and for the actual inequality of groups of workers who, owing to the operation of the principle of distribution according to work, have unequal

67 O.I. Shkaratan, "Sources of Social Differentiation of the Working Class in Soviet Society", in Yanowitch and Fisher, n. 46, p. 11.

68 Ibid., p. 13.

shares in the national economy of society.⁶⁹

This fundamental division and the resultant complexities in social structure will continue to exist right up to the building of communism, when the unprecedentedly high level of development of productive forces will permit to realise in actual practice the principle of "to each according to his needs". In such a society, although each would be receiving different amounts of social product, each would receive no less or more than what he required. And in such a situation, after all, without deprivation and without privilege,⁷⁰ where all-round development of all the members of society would occur, one can hardly speak of any stratification known in the history of mankind.

Distinction between the two Approaches

In opposition to structural-functionalism as a trend in current bourgeois philosophical thought and to the theory of social stratification enunciated by it, only material dialectics and the material conception of history, i.e., the Marxist theory of classes, can provide a genuinely scientific basis for understanding the social structure of any society and all the processes of its change, including social mobility. The essential differences between these two approaches can be formulated as follows.

69 Ibid., pp. 10, 14.

70 Robert A. Feldmesser, "Stratification and Communism", in Allen Kasoff, ed., Prospects for Soviet Society (New York, 1968), p. 365.

First of all, Marxist sociology, according to the principle of dialectics examines any society not abstractly, unhistorically but as a historically evolved, qualitatively definite type of society. Although certain general laws of social development operating at all stages of historical progress among all the people of the earth can be discovered, the social structure of every social order is distinct from the preceding and followed ones and, therefore, its specific features must be revealed. In contrast, the attempts of the bourgeois sociologists to divide every society into the same layers ("strata") independently of the prevailing socio-economic order cannot be regarded as scientific. Thus, the social-class structures of capitalist and socialist societies are fundamentally different and, hence, all arguments concerning their "increasing similarity", "convergence", and the like, must be rejected.⁷¹

Secondly, material conception of social life divides social relations into material and ideological relations, the latter representing only a superstructure relative to the former, which are formed apart from the will and consciousness of human beings. Therefore Marxist approach to social structure seeks the foundation of the division of society into social groups in differences in

71 M.N. Rutkevich and F.R. Filippov, "Principles of the Marxist Approach to Social Structure and Social Mobility", in Yanowitch and Fisher, n. 46, pp. 229-30.

their economic position.⁷² In contrast to this, the current bourgeois sociology considers that the position of individuals is determined by a "status hierarchy" and that this depends on the "scale of values" in the given society. Using these "values", especially prestige, as criteria of "social status" it derives the social division of society from manifestations of consciousness, public opinion etc.⁷³

Along with the concept of "status" the bourgeois sociologists introduce the concept of "social roles" which are varied and in their totality determine the position of the individual in society. As the "social role" of the individual is essentially his function in society, in this respect, the argument contains an element of truth. But bourgeois sociologists inject eclecticism and subjectivism into their "role theory". In the first place, they treat "social role" subjectively divorcing it from objective social position and the functions associated with it; secondly, in studying the multiplicity of "roles", they do not distinguish the principal role (function) at all or distinguish it arbitrarily. In reality, among the variety of functions or roles, there exists a basic function or role which is determined by the objective position of the individual and

72 Ibid., p. 230.

73 Ibid., pp. 230-31.

of the groups of which he is a member in the system of economic relations.⁷⁴

According to Marxist sociological approach to social structure, the first premise of which is a structure of objective economic relations in society, the main differences in position in the system of economic relations are essentially differences between social classes. Hence, class composition and class relations determine the principal features of the social structure of society, and thus, the functions of groups and the individuals in them, as well as the totality of "roles" belonging to them.⁷⁵

Thirdly, in elucidating the social structure, Marxist sociology and bourgeois sociology differ in their approach to economic characteristics. The latter assign a role to such objective economic features as income level and occupation along with it and parallel to such features of social division as prestige, power, education, religion, ethnic background etc., without elucidating their internal connection. Whenever such inter-connection between these factors, for instance, income and education is examined, it is done purely in empirical terms and outside the framework of the system of social production.⁷⁶ Further, while

74 Ibid., p. 231.

75 Ibid.

76 Ibid., pp. 231-2.

analysing the bourgeois scheme of economic gradation for "class" and "strata" attention is chiefly focussed on the amount of income, not on its source and the form in which it is received. "Thus, when heads of families with annual incomes of \$5,000 to \$10,000 in the USA are combined within a single 'stratum' the source of income remains concealed. However, this amount of annual income can be received either in the form of wages by hired workers or as the income of a small merchant or farmer."⁷⁷ Also, the income intervals presented are so wide that the same "class" includes both the employer and the skilled worker employed by the former.⁷⁸ Similar is the approach in case of presentation of occupational status of individuals; for instance, all individuals employed in mental work are put in the same category of "white-collar workers", thus obliterating the difference between the two-level employees of firms and their managers.⁷⁹

It is because of these anomalies and inadequacies, inconsistencies, that the use of economic characteristics as criteria of social divisions, outlined above, is not sufficient. In contrast, Marxist sociology in dealing with social structure "proceeds from the proposition that

77 Ibid., p. 232.

78 Ibid., pp. 232-3.

79 Ibid., p. 232.

material production is the essence of economic activity, and that the objective differences between groups of people in the system of production relations are embodied in the existence of classes".⁸⁰

80 Ibid., p. 233.

CHAPTER II

HISTORICAL DEVELOPMENT OF SOVIET SCIENCE AND TECHNOLOGY ; AN OVERVIEW

Throughout the history of Russia and the Soviet Union the development of science and technology can be traced quite distinctly in course of many centuries. External as well as internal factors may be discerned which conditioned the form, degree and extensiveness of this process in the pre-revolutionary era. In contrast to this, a planned development of science and technology was undertaken after the revolution that was purported to bring about a radical transformation of Soviet society in economic, social, cultural and political spheres. Since it is imperative for a scientific analysis of the historical development of science and technology to consider it along with the development of the production process, it is proposed therefore to indicate broadly the main periods in the history of Russia and the Soviet Union corresponding to the modes of production and scientific-technological developments, and then discuss them briefly. They are as follows:

- (1) The ancient period (up to the beginning of the seventeenth century)

- (2) The period of the development of handicrafts and manufacture (from seventeenth century to the end of the eighteenth century)
- (3) The period of the advent and initial development of capitalism in Russia (from the end of the eighteenth century until 1861)
- (4) The period of rapid development of capitalism in Russia (1861-1917)
- (5) The period of socialism (beginning with 1917).¹

(1) The Ancient Period

The process of economic development in Russia during the ancient period (right up to the seventeenth century) was somewhat different from that of the West European countries. In those days Russia was exceedingly thinly populated. The vast areas of Eastern and North-Eastern Russia and Siberia were covered with virgin forests and had few settlements. Even the Central Russia had not as great a number of cities and towns, in relation to the territory as a whole, as the West had. In short, natural economy was the principal mode of production.²

1 N.I. Figurovsky, "The Interaction between Scientific Research and Technical Invention in the History of Russia", in A.C. Crombie, ed., Scientific Change: Historical Studies in the Intellectual, Social and Technical Conditions for Scientific Discovery and Technical Invention, from Antiquity to the Present, Symposium on the History of Science (London, 1963), p. 702.³

2 Ibid.

Extensive damage to the handicraft manufacture of ancient Russia, which had absorbed many traditions of Byzantine handicrafts, was done by the Tatar invasion and by its 300-year long yoke lasting from the thirteenth century to the fifteenth century. Under such circumstances, the Russia of that period had practically neither scientists nor prominent specialists but only some building specialists and architects. During the sixteenth century, however, there appeared in Moscow and in other cities and towns of Western Russia doctors with an European education and such specialists as gunsmiths, mining and metal workers and the like. Handicrafts and commerce during this period developed considerably and reached quite a high level. Manufacture too appeared and began to develop. New trade routes between Russia and Great Britain and Holland were established by Ivan the Terrible. Thus a period characterised by a sort of renaissance was ushered in for Russia during the fifteenth and sixteenth centuries.³

But feudal mode of production, which lasted longer in Russia than in other countries of Europe, and the exclusive domination of religious ideology, did not stimulate traditions of scientific research. In fact, the existing handicrafts and petty manufacture catering

³ Ibid., pp. 702-3.

for the primitive needs of the population practically did not arouse any large scale problems for scientific research.⁴

(2) The Period of the Development of Handicrafts and Manufacture

The period of the seventeenth century to the end of the eighteenth century was that of the development of handicrafts and manufactures. A considerable development of trade and manufacture during this period confronted Russia with the problem of exploiting and utilising the enormous resources it possessed. The beginning was made in the year of 1613 with a considerable flourishing of medicine and pharmacy in Russia. The Pharmaceutical Department was founded as early as the end of the sixteenth century, developed by the first half of the seventeenth century into not only an administrative medical centre but also an educational and research institution. To cater for the needs of the army and the population it solved a large number of medical and pharmaceutical problems, collected and revised foreign pharmacopoeias and medical books.⁵

Side by side with medicine, great developments took place in the production of such chemicals as potash,

4 Ibid., p. 703.

5 Ibid.

saltpetre and gun-powder, in the glass and paper industries, alcohol distilleries and so on. Defence and industrial requirements necessitated the establishment of many departments. Administrative bodies were set up to supervise the production of guns, arms, gun-powder, prospecting for metal ores etc. Some of these departments had also research laboratories attached to them.⁶

The manufacturing of woollen and linen fabrics, tanning, chemicals and other products continued to thrive in the latter half of the eighteenth century. Especially noteworthy among them was the rapid progress of metallurgical industries, and above all, iron-ore mining and processing in Central Russia (Tula, the Moscow area) in Eastern Russia and the Urals.⁷

The initiatives for industrial development of Russia taken by Peter the Great created more favourable conditions for the nascent manufacture industries. Realising the economic backwardness per se as well as this being a hindrance to the military strength of Russia (Russia was frequently engaged in warfare), he favoured scientific progress and encouraged in every way the growth of various new industries, particularly the metallurgical

6 Ibid., p. 704.

7 Ibid.

and ship-building industries. Early in the eighteenth century he organised systematic exploitation of the natural resources of the Urals and Siberia, established copper-smelting and the processing of silver ore and other industries. He initiated the building of a number of ports and fortifications and of new cities. Petersburg, for example, was founded by him in 1703.⁸

Science was not taught in Russian schools before 1700. However, the industrial and economic development of the country could not be possible without scientific and technical development. While the upsurge of industrial revolution was changing the other Western European economy, Russia could compete with them only on the basis of similar developments at home. Besides, the logic of the capitalist mode of production at the stage of manufacture demanded new means and devices to enhance production of industries, to establish new industries, to exploit and utilise the country's immense natural resources. Thus, these economic requirements stimulated the need of education and cultural growth of the population, of the development of science and technology.

It was under this necessity that Peter created schools in Russia for teaching mathematics, science and medicine and crowned his educational programme with the

8 Ibid.

establishment of the Imperial Academy of Sciences at St. Petersburg as the highest institution of learning in Russia. The Academy was given duties on an ambitious scale, many of which it failed to carry out: it was expected to perform scientific research of a high order, to solve practical problems, to act as an advisory body to the government; and to organise the country's higher and secondary education. In 1747 it was divided into two parts - the Academy proper, and the University - in order to shed its responsibilities for education. The Academy was to inform the government at the beginning of each year of the problems it planned to study and it was made mandatory for academicians to work on special requests emanating from various government agencies.⁹

Since at the time of the establishment of the Academy Russia had not enough competent scientists to staff it, the first academicians had to be imported from Switzerland and Germany who dominated it for the whole eighteenth century.¹⁰

The notable feature of the activity of the Academy by the middle of the eighteenth century was the work of

9 D.A. Senior, "The Organisation of Scientific Research", Survey (London), no. 52, July 1964, pp. 19-20.

10 George Vernadsky, "Rise of Science in Russia, 1700-1917", The Russian Review, vol. 28, no. 1, January 1969, pp. 37, 40.

M.V. Lomonosov which reflected the need of the Russia of that time for scientific research. He was the first scientific academician of Russian origin. He was one of the most prominent atomists of the eighteenth century and a pioneer in the solution of many problems of physics and chemistry. Together with G.W. Richman he experimented with atmospheric electricity, designed projects for sea-routes across the Arctic Ocean, examined the causes of Aurora Borealis and conducted many experiments in other fields as well. He built the first state scientific research and teaching chemical laboratory in 1748 wherein he carried on his research work. He worked out plans for expeditions to the north-eastern part of Siberia and solved many technological problems related to the production of mineral paints, porcelain, stained glass etc. His twenty-five years of activity is the "best possible example of the close connection existing between the scientific research done in Russia and the requirements ^{of} the growing industry and the needs of the national economy at large".¹¹

It was on Lomonosov's initiative and in accordance with his project that Moscow University was founded in 1755 and which became Russia's great centre of learning of science and culture.

According to many historians, the period of capitalism in Russia began in the third quarter of the

11 Figurovsky, n. 1, p. 707.

eighteenth century. During this period rather large-scale enterprises of capitalist type sprang up and rapidly flourished. This was particularly true of the mining and metallurgical industries with hired workers which gradually replaced manufactures manned by serfs. Despite Russia's still continuing to be mainly an agricultural country, it were the needs of the growing industry that greatly influenced the choice of the fields in which scientific research were conducted at the Academy of Sciences. For example, the chemists of the period following Lomonosov's time - I.G. Leman (in the field of metallurgy), I.I. Georgy (traveller and practical chemist), T.E. Lovits (who discovered absorption from solutions and many methods of analytical chemistry), N.N. Sokolov, Y.D. Zakharov, V.M. Severgin (practical chemists), K.G. Laxmen (traveller and chemical technologist), the physicist V.V. Petrov (who discovered the electric arc in 1805) and others - closely associated their activities with the vital requirements of the growing capitalist industry of Russia.¹²

(3) The Period of the Advent and Initial Development of Capitalism in Russia

The rapid growth of capitalist industry slowed down by the beginning of the nineteenth century. The main

¹² Ibid., p. 708.

cause of this lay in the predominantly feudal mode of production existing in Russia. The Tsarist government, particularly during the rule of Catherine II, was mainly supported by the feudal nobility and under whose pressure government used every means at its disposal to build up and perpetuate the domination of landlords based on the slave labour of serf peasantry. The domination of feudal and landlord system restricted the growth of capitalist elements. This slowing down of the development of capitalism also affected scientific advancement. The governments of Alexander I and later of Nicholas I not only did not encourage research into natural sciences but also hindered it, regarding it as a source of what was called "free-thinking" or progressive ideas that would have brought about irreparable disintegration of values on which the autocratic state was built. At one time the government even suspended the customary visits of Russian scientists to European cities.¹³

Though the growth of capitalist sector had slowed down, it could not be stopped. Its needs were becoming quite tangible. One result of this was the foundation of several universities and technical institutions in the first early half of the nineteenth century: Kazan University in 1804, Kharkov University in 1805, Petersburg University in 1819, Technological Institute in 1828. The spontaneous

¹³ Ibid., p. 709.

and natural development of Russia's industry brought about tangible changes in the structure of national economy even in the 1830s and 1840s. Capitalism continued to gain fresh ground in the field of industry, particularly in mineral ore processes, which immediately resulted in the appearance in Russia of many prominent scientists and scientific schools in various fields in many Russian cities and towns.¹⁴

Rapid and notable progress in scientific research was achieved particularly in Petersburg, where the middle of the nineteenth century saw the rise of prominent mathematical schools led by M.V. Ostrogradsky, of the astronomer V.Y. Chebyshev who founded the Pulkovo Observatory, of the Chemists H.I. Gess, A.A. Voskresenky, N.N. Zinin and J.F. Frietsche, of the physicists E.C. Lents and B.S. Jacobi, and of many other representatives of natural sciences. Research groups were formed in other towns as well - such as Moscow, Kharkov, Kiev, Tartu etc.¹⁵

With the passing of time, an increasingly large number of prospective young scientists graduated from the universities and technical schools and by 1860 Russian specialists in science and technology were engaged in both research and training. An increasing number of Russian members occupied the seats at the Academy of Sciences which

14 Ibid., p. 710.

15 Ibid.

eventually became thoroughly Russianized.¹⁶ Meanwhile, the Academy was merged in 1841 with the Imperial Russian Economy and so acquired responsibilities for the study of language and literature. It was now separated into three departments: the Department of Physico-Mathematical Sciences, the Department of Russian Language and Literature, and the Department of Historical and Political Sciences and Philology.¹⁷

(4) The Period of Rapid Development of Capitalism in Russia

The Emancipation Act of 1861 formally released the peasantry from serfdom. The collapse of serfdom facilitated the rapid development of capitalism in Russia in the following years. The latter was accompanied by a simultaneous flourishing of science and technology. A number of new universities and technological schools were opened, prominent among which were the Polytechnic Institute at Riga (1862; enlarged in 1896); the "New Russia" University at Odessa (1865), the Moscow Technical School (1868), the universities of Tomsk (1888) and Saratov (1909); the Kharkov Technological Institute (1865), the Kiev Polytechnic Institute (1898), and the Peter the Great Polytechnic Institute in St. Petersburg (1902).

16 Vernadsky, n. 10, p. 41.

17 Senior, n. 9, p. 20.

Despite Russia's considerable backwardness in comparison with Western Europe and the United States at that time, science stimulated by the ever-going demands of production was rapidly reaching the level of the scientific development in those countries and producing ever greater number of experts in science and technology. The scientists of pre-revolutionary Russia did not confine themselves merely to research into applied branches but solved numerous theoretical problems as well. The work of several young biologists showed conclusively the entrance of Russian scholars into the age of Darwinian evolutionism and their contribution to evolutionary paleology and comparative embryology. The work of P.L. Cherbyshev and the St. Petersburg school in mathematics received recognition beyond Russia. N.I. Lobachevskii's non-Euclidean geometry became widely known. It was A.M. Butlerov who gave the first clear and comprehensive formulation of the structural theory in chemistry. D.I. Mendeleev's periodic system of elements is regarded as one of the greatest chemical contributions of the nineteenth century. The foundations were also laid for soil science as a Russian national science and for a mathematically integrated system of crystalline forms.¹⁸ During this period "the interdependence of technological development, the growth of the

¹⁸ Alexander Vucinich, Science in Russian Culture, 1961-1917 (Stanford, California, 1970), p. 474.

industrial potential and the prospect of research can be traced both in the great upsurge of all the natural sciences, and in the examples of the immediate effect of the practical requirements of technology (in metallurgy, oil and coal extraction, and other fields) on the subjects of research".¹⁹

The above survey of the growth of science and technology in the pre-revolutionary Russia brings forth the fact that the initial tempo thereof was slow and was accelerated steadily over the 1860s. The main reasons why science and technology did not flourish in the pre-revolution Russia were the social, economic and political conditions prevailing there.

First of all, it did not have a single class or estate on which it could depend in building a strong national tradition in science and technology. It was mainly an agrarian country with feudal or/and capitalist relationships in agriculture. But neither the gentry nor the clergy, the two relatively well-educated and financially secure estates, were reliable sources of scientific manpower²⁰ and were least interested in scientific research and practice.

Secondly, a natural independent development of capitalism in industry did not take place in Russia. The industrial sector was mainly owned and/or controlled by

19 Figurovsky, n. 1, p. 714.

20 Vucinich, n. 18, p. 484.

foreign capitals and operated by foreign managers and technicians. They were not interested in and could not find it in their interests to pursue the indigenous development of science and technology in Russia, lest they should lose their control on the economy of the country. Consequently, they often relied on trade secrets in their business and displayed little eagerness to tap Russian resources of scientific knowledge and engineering skills.²¹ Russian engineers and other scientific and technical personnel were not allowed to make changes in foreign blue-prints and instructions. In most foreign-owned factories there were no laboratories or designing offices, and whether they liked it or not, Russian scientists and technicians were compelled to confirm strictly to foreign drawings, calculations and instructions.²² Further, even though Russia had many outstanding experts in theoretical and applied metallurgy, foreigners held all the top engineering positions in large factories.²³

Finally, the Government of the Tsars, by its very feudal character as also its dependence on the West for the country's disproportionate economic development could not effectively control and coordinate these activities. Since the indigenous bourgeoisie too was weak and dependent on the foreign capital and the Tsar, it also did not or could

21 Ibid., p. 436.

22 V. Kasyanenko, How Soviet Economy Won Technical Independence (Moscow, 1966), p. 6.

23 Ibid., p. 8.

not invest substantially in science and technology - a necessary prerequisite for capitalist development. Thus, the country remained backward and dependent on other countries for all the machinery and equipments and expertise necessary for industries.²⁴

However, at the end of the nineteenth century, the Russian bourgeoisie, made up primarily of the commercial class, emerged as a distinct class. This new and relatively small class did not only show a respect for scientific pursuits but also gave important financial aid to scientific institutions. Especially significant was its role in financing a private system of research institutes and schools, which rose to new heights in the twentieth century just before the October Revolution of 1917.²⁵ It should, however, be noted that though by the end of the nineteenth century Russia did acquire a full-fledged membership of the international and scientific community, it lagged behind Europe and America even in 1917.

24 Ibid., p. 6.

25 Vucinich, n. 18, p. 486. A few notable among such institutes were the Ledentsov Society for the Advancement of Exact Sciences and Their Practical Application and Shaniavskii University, which opened higher education to young people regardless of sex, religion, ethnic and social backgrounds and with its own curriculum not prescribed by the government so that it could adapt to the needs of the rapidly changing natural and social sciences. See, *ibid.*, pp. 486-7.

(5) The Period of Socialism

Before the February Revolution in 1917, Russian science had largely been an elite establishment within the then prevailing social, economic and political structure. All kinds of research units in the natural and technical sciences, in universities, institutes, commissions and so on were mainly supported by the state and formed a hierarchical pyramid with the Imperial Russian Academy of Sciences at its head and in the most privileged supreme position. Members of scientific institutions, professors in the universities and all others with scientific degrees at a post-graduate level had a very high place in the Russian social structure. The average income of a professor or member of the Academy was about twenty to thirty times higher compared to that of an industrial worker. Very few among the scientific community belonged to or sympathised with the aims of the radical revolutionary socialist parties. Many of them, however, strongly opposed the absolute monarchy in its existing form. Yet, when it came to the question of their participation in political life, most of them associated themselves with the more moderate constitutional democrats (Kadets) or other groups in favour of parliamentary democracy, although some of them did belong to the moderate socialist party, the Mensheviks.²⁶

²⁶ Zhores A. Medvedev, Soviet Science (New York, 1978), pp. 3-4.

The collapse of the monarchy in February 1917 was welcomed by the scientific community of Russia which also favoured a democratic system largely an imitation of the British system. It cooperated with the Provisional Government in its attempt to put an end to the anarchy and disorder which prevailed after the collapse of the monarchy. The government on its part took measures during its short tenure which supported and strengthened the scientific community. These measures were mostly guided by immediate military needs of Russia, to continue the war to a victorious conclusion. Thus, between March and October of 1917 several research institutes were established, most of them devoted either to the study of national mineral resources or to the development of those branches of science and technology oriented toward defence requirements.²⁷ As the Provisional Government did not carry out any fundamental change in the basic social structure of society, there was not any marked change in the sphere of science and technology.

The Bolshevik Revolution of 1917 dealt a death-blow to the old social, economic and political structure of the Russian society. This could not but affect the scientific and technological policy of the government as well.

27 Ibid., p. 5.

Soviet Russia inherited from the pre-revolutionary Russia a whole galaxy of prominent Russian scientists and all the scientific and technical schools that reflected specifically Russian scientific and technical traditions. This situation proved of great importance for the future advancement of science and technology in the country and constituted one of the prerequisites for the rapid and many-sided progress of science and technology in the Soviet Union.²⁸

Given the attitude of the scientific community to political life, which has been mentioned above, the Bolshevik Revolution was not welcomed by the majority of the scientific and technical elite. This was a major constraint guiding the Soviet policy towards science and technology. The Council of People's Commissars (as the new government was called) and the leadership of the Bolshevik Party became suspicious of and hostile to "bourgeois" scientific and technical experts. Those few prominent scientists, such as K.A. Timiriazov, a plant physiologist, or V.R. Williams, a soil scientist, who favoured the Bolsheviks and their revolutionary ideals received strong political support and publicity.²⁹

The period of the development of science and technology in the Soviet Union may be sub-divided into

28 Figurovsky, n. 1, p. 714.

29 Medvedev, n. 26, p. 5.

several phases: (a) economic rehabilitation; (b) the development of science and technology during the early years of socialist construction and industrialisation of the country; (c) World War II, and (d) the post-Second World War phase.³⁰

No sooner had the Bolshevik Government took over than it found itself confronted with an economy that was devastated by the war, foreign exploitation and feudal-capitalist system. Most of the mills and plants lay idle. Transport was disrupted. The population was starving. Before the new government could take remedial measures there came the civil war and foreign intervention (1918-21). The country was once more faced with its security and the defence of the revolution. Yet, it was during these grim years that very important steps were taken to lay the foundation for the future limitless flourishing of science and technology.

After the proletariat had captured state power and to the extent that the task of expropriating the exploiters and suppression of their resistance had been carried out in the main, the immediate necessity was to raise the productivity of labour and in this connection (and for this purpose) securing better organisation of labour. However, the raising of the productivity of labour

30 Figurovsky, n. 1, p. 714.

first of all required the material basis of large-scale industry, namely, the development of the production of fuel, iron, the engineering and chemical industries. The country enjoyed the favourable position of having at its disposal, even after the Brest peace, enormous reserves of ore (in the Urals), fuel in Western Siberia (coal), in the Caucasus and the South-East (oil), in Central Russia (peat), enormous timber reserves, waver power, raw material for the chemical industries etc. The development of these natural resources would provide the basis for the unprecedented progress of the productive forces, but this could be done only with the help of modern technology.³¹

Under the conditions of the building up of a new socialist society on the ruins of the old Russian society, the planning of all branches of national economy including science and technology, formed the basis for the development and strengthening of the new socialist state. As far back as April 1918 - the hardest time of post-war devastation - Lenin, as the head of the Soviet government, drew up a Draft Plan of Scientific and Technical Work in which he suggested ways of developing the country's scientific research which were to be closely linked with the solution of important technological problems. The Draft Plan suggested to the Supreme Economic Council to immediately give its

31 V.I. Lenin, "The Immediate Tasks of the Soviet Government", Collected Works, vol. 27, p. 257.

instructions to the Academy of Sciences, which had launched a systematic study and investigation of the natural productive forces of Russia, to set up a number of commissions entrusted with the task of speediest possible compilation of a plan for the reorganisation of industry and the economic apparatus of the country.

The plan emphasised the need of the "rational distribution of industry" in the country, of "the rational merging and concentration of industry in a few big enterprises from the standpoint of the most up-to-date large-scale industry", of "special attention to the electrification of industry and transport and the application of electricity to farming, and the use of lower grades of fuel (peat, low-grade coal) for the production of electricity, with the lowest possible expenditure on extraction and transport", and of "water power and wind motors in general and in their application to farming...."³²

There were social, economic and political factors that guided the Soviet science and technical policy in the years of economic rehabilitation as in later years.

After the Revolution, the land was taken from the landlords and nationalised; it was distributed among the peasantry. Collective farms and state farms existed in a very negligible form. The large chunk of land was occupied

32 V.I. Lenin, "Draft Plan of Scientific and Technical Works", Collected Works, vol. 27, pp. 320-21. Emphasis in the original.

and tilled by individual farmers. Implications of it were, however, clear. So long as the small-scale production remained in the countryside, it was the soil of the growth of capitalism. The same was true of industrial sector wherein too the small-scale industry existed considerably. To undermine the foundation of capitalism, to tear up the roots of capitalism, there was only one way "to place the economy of the country, including agriculture, on a technical basis, that of modern large-scale production. Only electricity provides that basis".³³

During the years of civil war and foreign intervention, of economic rehabilitation, what is known as the years of "War-Communism", the peasantry was forced to part with its grain to the state to support war needs and industrial workers. The revolution was carried out by peasantry-working class alliance (smytchka) and forcible expropriation of grain could damage this alliance, the basic support of the Soviet state. Yet, under these circumstances, in tangible terms, the state could not repay the peasantry for grain. The paper-money did not satisfy the peasant who demanded industrial goods in exchange for his grain.³⁴ The

33 V.I. Lenin, "The Eighth All-Russia Congress of Soviets, December 22-29, 1920", Collected Works, vol. 31, p.516.

34 Lenin calls it peasantry's "legitimate rights". See V.I. Lenin, "Speech at the Third All-Russia Conference of Directors of Adult Education Division of Gubernia Education Departments, February 25, 1920", Collected Works, vol. 30, p. 377.

Soviet state could not, however, satisfy the demands of the peasant without the rehabilitation of the economy, rehabilitation of industry. Rehabilitation of industry could not be carried out on the old economic and technical basis. That was technically impossible and absurd. It "must be rehabilitated on the basis of modern technology which means the electrification of industry and a higher culture. Electrification takes up to ten years' work, but it is work at a higher cultural and political level".³⁵

It was in this perspective that Lenin stressed on two points: establishment of large-scale industries based on modern technology and the electrification of the country. These were perceived as the basic conditions of building socialism and communism in the country. In an eloquent manner Lenin said: "Communism is Soviet power plus the electrification of the whole country".³⁶ Electrification of industry, agriculture and transport and a revolutionary harnessing of energies for the swiftest possible procurement and delivery of the largest possible quantity of fuel of every kind - coal, shale, peat and wood - constituted the core of science and technology policy in the early

35 Ibid.

36 Lenin, n. 33, p. 516. Emphasis in the original.

years of the Soviet state.³⁷

The All Russia Central Executive Committee on 7 February 1920 adopted a resolution on electrification which, among other things, noted that "in view of the prime importance of electrification for industry, agriculture and transport,...and so on and so forth...the Committee resolves to authorise the Supreme Economic Council to work out in conjunction with the People's Commissariat for Agriculture, a project for the construction of a system of electric power stations".³⁸ In pursuance of the above resolution, the Presidium of the Supreme Economic Council, on 21 February 1920 confirmed the State Electricity Commission set up under the Electricity Department. The statute on GOELRO was endorsed by the Council of Defense. The Supreme Economic Council determined the composition of the commission, and a number of leading experts and workers mainly from the Supreme Economic Council, the People's Commissariats for Agriculture and for communications were recruited.

37 As regards the harnessing of fuel (at that time Russia was facing fuel crisis), Lenin, while emphasising its necessity, said that without a solution to the fuel problem "it will be impossible to solve the food problem, or the war problem, or the general economic problem". See V.I. Lenin, "The Fight to Overcome the Fuel Crisis", Collected Works, vol. 30, p. 140.

38 Quoted in V.I. Lenin, "Integrated Economic Plan", Collected Works, vol. 32, p. 138.

The GOELRO's efforts resulted in a voluminous scientific publication "The Plan for the Electrification of the R.S.F.S.R." which was submitted as a report of GOELRO to the Eighth Congress of Soviets in December 1920 and was endorsed by the latter. The Plan dealt with (a) electrification and a state economic plan; (b) fuel supply (with a detailed "fuel budget" for the R.S.F.S.R. over the next ten years with an estimate of the manpower required); (c) water power; (d) agriculture; (e) transport; and (f) industry. The plan ranged over 10 years and gave an indication of about 370 million man-days and of 1,000 of capacities. It also provided for the size of the first 20 steam and 10 water power district electric stations and a detailed description of the economic importance of each.³⁹

The organisation of Soviet economy on a new modern scientific and technical basis required the cooperation of the scientific and technical community. As most of the members of it were opposed to the revolution and the new government, the new programme of economic and political reorganisation led inevitably to a conflict with them, with the privileged scientists and technical experts.

In the early years, the Soviet Government was hostile to the "bourgeois" scientists and specialists which led to many of them being either executed or their emigration.

³⁹ Ibid., p. 139.

The mistake was realized soon after the Bolshevik government took measures for economic rehabilitation and for restoration of industry for military purposes in order to fight the dangerously prolonged civil war and foreign intervention. Any large scale war, including civil war, requires technological support and, therefore, a policy of reconciliation with and toleration for the hostile scientific and technical elite was adopted. The change of attitude was evident from the beginning of 1919 and particularly at the Eighth Congress of the Bolshevik party. Lenin proposed a resolution to the Congress which recommended that the ideological approach towards scientists and technicians be dropped. The resolution was approved and became the official line. It declared:

The problem of industrial and economic development demands the immediate and widespread use of experts in science and technology whom we have inherited from capitalism, in spite of the fact that they inevitably are impregnated with bourgeois ideas and customs. 40

To win these specialists, Lenin favoured an unequal wage system with higher pay for local specialists. He said:

Even if we pay several million a year in wages it will not be too much as long as we learn to work with their help....We cannot equalise wages and as long as there are few specialists we shall not refuse to raise their wages. We say that it is better

40 V.I. Lenin, q quoted in Medvedev, n. 26, p. 9.

to pay out an extra million or a thousand million as long as we can employ all the specialists, for what they will teach our workers and peasants is worth - more than that thousand million. 41

The same attitude was adopted towards the technology from the foreign capitalist countries. The chief interest was to obtain, as quickly as possible, from the capitalist countries, the means of production, namely, locomotives, machinery and electrical equipments, for these could not be made available domestically and without which industry could not be seriously rehabilitated. The foreign capitalists could be attracted, however, only with the motive of extra profit. The Soviet state must pay this extra profit to enable itself augment, in the shortest possible time, its stocks of equipment, materials, raw materials and machinery for the purpose of restoring large-scale industry. The second advantage which could accrue from this additional payment was to obtain an opportunity to learn scientific and technological know-how from the up-to-date enterprises, by stipulating that the Soviet technicians must take part in the work. This could also

41 V.I. Lenin, "Sessions of the Petrograd Soviet", Collected Works, vol. 29, pp. 35-36. In fact the difference between the wages of good specialist and an unskilled worker in the post-1917 period was comparatively lower than that before the revolution. In the latter case the ratio of difference was 20 to 1 while in the former case (i.e. 1919) it was 5 to 1. See *ibid.*, p. 35.

serve as a guarantee against military action against the Soviet Union by the capitalist countries for "war cancels everything, and should one break out we shall get possession of all the buildings installations and railways".⁴²

It was expected that this new approach would serve to accelerate processes of education and research in the field of science and technology. A new "revolutionary" generation of scientists and technical experts would be trained who would later be able to replace "bourgeois" scientists, engineers and intellectuals.⁴³

Despite the manifold difficulties that the Soviet Government faced in the wake of Civil War it simultaneously opened many possibilities of the development of science and technology. Thus, large scale scientific investigations were launched in 1918 and 1919. The Research Institute of Physico-Chemical Analysis and the Research Institute of Platinum and Other Precious Metals were founded in 1918. Oil prospecting was started in the Volga area in Bashkiria. In 1919 a thorough investigation began into the Kursk magnetic anomaly which resulted in a discovery of enormous resources of iron ore. In 1919 many institutes were created within the Academy of Sciences, including the Institute of Optics and the Institute of Radium. In the field of applied

42 Lenin, n. 33, p. 481.

43 Medvedev, n. 26, p. 9.

sciences, many research institutes were set up in 1918-1919 which included the Electro-Technical Institute, the Academy of Mining and Engineering, the Central Aerohydrodynamics Institute (for research in aviation technology), the Institute of Applied Chemistry, the Institute of Fertilizers, and so on. Also founded were several universities and institutions of higher learning that included the universities of Tbilisi, Nizhni, Novgorod, Tashkent and others. In 1919 the first few hydro-electric power stations were constructed. The First National Congress of Physics took place in 1919 and received a great deal of publicity in the Soviet press. A permanent "Atomic Commission" organised in Petrograd in 1920 by several academicians and supported by a group of scientists tried to co-ordinate research on the structure of atoms. This Commission with which were associated the leading Russian physicists (Professor A.F. Ioffe, D.S. Rozhdestvensky, Igor Kurchatov and others) later played an important role in the Soviet military atomic programme.⁴⁴

The creation of large research institutes in pure and applied sciences supported by the Soviet Government was first of its kind in the organisational structure of international science. In other countries most of the research was carried out under the aegis of universities and colleges

⁴⁴ Ibid., p. 12.

and was not co-ordinated by any government body. On the contrary, in the Soviet Union the linking of science to social needs and state interests was, and has been, explicit and 'theory-based' since 1917. Science, belonging to both the economic base and superstructure, was to play a significant and leading part in the achievement of human liberation, first through socialism and then communism.⁴⁵

The year of 1921 not only marked the victorious end of the Civil War, it was also the year of economic crisis and of the failure of the system of "war communism". The New Economic Policy which favoured a liberal policy in trade and production whereby state and private trade, private enterprise production and socialist production, was to exist simultaneously, also further loosened its control on the ideology of the bourgeois scientists. Strong state support for scientific, technological and educational growth created an extremely favourable climate for the development of Soviet science and technology.⁴⁶ In January 1921 Lenin discussed with the leading scientists of the Academy of Sciences and of the Navy Medical Academy some scientific development

45 Hilary Rose and Steven Rose, "The Incorporation of Science", in Hilary Rose and Steven Rose, ed., The Political Economy of Science: Ideology of/in Natural Sciences (London, 1976), p. 26.

46 A special decree of the Soviet Government in the beginning of 1921, for example, provided new facilities and unlimited support for the physiological research of the Nobel Prize winner and academician Ivan Pavlov who was working in Petrograd. See Medvedev, n. 26, p. 14.

which covered the restoration of international scientific cooperation, the exchange of scientific literature, financial and material support for new institutes and laboratories, a set-up in scientific training and other measures. Most of the research institutes, laboratories, departments, university and technical college faculties, learned societies and technical bureaus remained headed, as a rule, by the representatives of the old scientific elite, the "bourgeois" specialists.⁴⁷ Scientists were, however, divided between those who were trained in the pre-revolutionary Russia and retained bourgeois ideas and attitudes and, those who, though were trained in pre-revolutionary Russia but supported the Soviet ideology. The latter coupled with the slowly growing number of Bolshevik-minded graduate scientists were the only effective and chosen means through which gradual ideological pressure was exerted upon the former.⁴⁸

Although the Academy of Sciences of the USSR, whose main base was still in Petrograd (renamed Leningrad after 1924), retained its considerable prestige, but in the following years it became less influential as a research establishment. Several new academies that were created during the NEP period, including the All-Union Academy of Agricultural Sciences, the Academy of Medical Sciences, the

47 Ibid.

48 Rose and Rose, n. 45, p. 26.

Ukrainian Academy of Sciences and other research centres for applied sciences, which often had a very wide network of experimental stations and design bureaus, became the dominant force in the scientific and technological development of the USSR.⁴⁹

In order to acquire scientific and technological knowledge from the capitalist countries, after 1920, first the Academy of Sciences and later some other research centres took steps to establish direct links with foreign research centres. Although international cooperation in scientific and technical sphere was at first modest, it played, nevertheless, an extremely significant role in the development of Soviet science and technology. In the period of 1920-23 there were not many political and bureaucratic restrictions on visits abroad (like the right of emigration). But, the shortage of foreign currency became a major constraint in limiting the opportunities for official foreign travel.⁵⁰

At the government level, in this period, science was directed by Glavanka, a special department of the People's Commissariat of Education. The Glavanka was also responsible for Soviet scientists' travel and contact abroad.

49 Medvedev, n. 26, p. 15.

50 In 1920 the Academy of Sciences sent only ten persons abroad for research and education while in 1922 the figures went up to seventeen, in 1924 to twenty-five and in 1926 to forty-four. See *ibid.*, p. 16.

The same responsibilities were also shared by the All-Union for Cultural Connection with Foreign Countries (VOKS) which was established in 1924. The All-Union Council of Industry and Agriculture - the proto-type of the future State Planning Commission - created a scientific-technical department and gave the latter the responsibility for imports of modern scientific-technical equipment and literature. The scientific-technical department (NTO) established a permanent office in Berlin known as the Foreign Science and Technological Bureau (BINT) and through which the Soviet libraries and institutes began to receive about eighty foreign scientific journals, as well as some advanced optical and other research equipments from the Zeiss and Siemens Companies. The growth of Soviet science in these years was reflected in the rapid increase in the number of scientific journals, paper and books. By 1922 the number of research publications amounted to four times greater than in 1921 and it was eight times greater by 1923.⁵¹

The speedy recovery of industrial and agricultural development due to NEP led to more financial support of scientific and technical research. This and comparative ideological tolerance for the "bourgeois" specialists provided an unique opportunity for real scientific and technological progress during 1921-1928. A large group of

51 Ibid., pp. 16-17.

young talents raised by the Revolution from popular grass roots, trained by the "bourgeois" specialists and nurtured in new environment, were to take the new lead in the future development of science and technology in the Soviet Union and to lay the modern technological foundations for the building of socialism in the form of large-scale industrialisation programme.

As it happened by the beginning of the period of industrialisation (1927-29), the wide network of scientific and technical institutions contributed to a number of scientific discoveries and solutions to numerous important theoretical and technological problems. A mechanism of central planning was introduced in the late 1920s in order to provide the instruments and the agencies for the rapid growth of Soviet industry and the rapid progress of Soviet technology. The strategy that was adopted as the supreme aim of economic policy, namely, "to catch up and overtake the advanced capitalist countries in both a technological and an economic respect"⁵² carried with it the explicit corollary that Soviet industrialisation must be based on and improve upon the most advanced technology of the West.⁵³

"A conscious attempt to control the development of science and to bring about rapid technical progress was built into

52 I.V. Stalin, *Socinenija (Works)* (Speech of 19 November 1928), cited in "Organisation for Economic Co-operation and Development", Science Policy in the USSR (Paris, 1969), p. 381.

53 *Ibid.*

Soviet planning at the very beginning.⁵⁴ The planning of scientific and technical effort and a close contact between the activities of scientific institutions and industry made it possible to create new industries that were thought unfeasible only a short while before; on the part of industries, their development brought about a veritable leap in scientific research. A number of examples might be cited of the solution of important technological problems by scientists during the early years of industrialisation. For instance, the brilliant way of producing synthetic rubber discoveries in 1928 (by S.V. Lebedev), the solution of the problem of "optical glass", a method of processing apatites into fertilizers, and the potassium problem.⁵⁵

Rapid industrialisation and collectivisation of agriculture revealed an acute shortage of specialists and scientific workers in various branches of science and technology. To solve this crisis, a total reform of higher education was carried out in 1929. An extensive network of special higher institutions was created around the few universities and institutions of higher learning. At the outset, an acute shortage of competent teachers too was felt but was overcome soon with the help of younger generations. Fresh groups of young students from the peasantry and worker

54 Ibid.

55 Figurovsky, n. 1, pp. 716-17.

background entered higher schools between 1929 and 1933. They eagerly absorbed knowledge and applied it at the mills and plants after classes were over.⁵⁶

The contribution of the pre-revolutionary specialists was not negligible. Many of them delivered daily lectures at the institutions of higher learning, supervised the work of post-graduates, gave scientific advice to the industrial enterprises, did research at scientific institutes, wrote textbooks and so on. As for the professional scientists, so for engineers and workers favourable conditions were created during the period of industrialisation. Both the groups together carried out new inventions and the rationalisation of technological processes on a large-scale. Many inventors and self-made technologists combined their activities with prominent scientists and engineers made it possible to settle numerous questions arising daily from the practice of construction.

Technological processes partly filled in the gap of technological experience and traditions of research in certain new branches of science which did not exist in old Russia.⁵⁷ Partly the gap was filled in by the import of new machinery and technical equipment, of modern foreign technology and by the employment of many experts from

56. Ibid., p. 717.

57 Ibid., pp. 717-18.

abroad who were invited for technical and research assistance.⁵⁸

Generally speaking, the development of science and technology in the years preceding the Second World War was greatly enhanced by the fact that the problems solved by the research institutes and higher schools were closely linked with the vital needs of industry and national economy. As it happened, in the 1930s there was a widespread system of research under contracts with industrial enterprises in accordance with plans made by state planning bodies. This in no way, however, implied an absence of theoretical investigations in the country. For they went on, with considerable success, at the Academy of Sciences, which by the middle of the 1930s had considerably grown numerically and extended the network of its scientific institutions.⁵⁹

The Academy of Sciences of the USSR and the other such academies almost tripled their membership and the

58 The historical world economic crisis and depression of 1929-33 helped the Soviet Government to employ many thousands of foreign experts for the latter could be assured of higher wages in the Soviet Union. Special small villages for these foreign experts around the main centres of industrial development where these experts enjoyed a much higher standard of living and many more privileges in consumer goods than their Soviet colleagues doing the same work. See Medvedev, n. 26, p. 28.

59 Figurowsky, n. 1, p. 718.

number of students at universities, at technical, medical and agricultural higher schools increased between 1929 and 1937 by five or six times. In 1913 the number of universities and other higher schools and research institutes in Russia was 298; by 1937, in the USSR, the figure had reached 2,000 and just before the Second World War, it was 2,359; the total number of research scientists had grown to about 150,000.⁶⁰ In 1918 there were 44 research institutions (including museums and committees) under the auspices of the Academy of Sciences, the figure increased to 57 in 1931, 75 in 1934, 97 in 1938 and 102 in 1940.⁶¹ In 1932, in a number of Union Republics branches of the Academy of Sciences were established which numbered 10 before the outbreak of Second World War. Central Academies of Sciences proper existed at that time in the Ukrainian Republic, the Bielo-russian Republic, the Georgian Republic and the Armenian Republic.⁶²

A statute promulgated in 1930 had stressed the principle of practical usefulness as the chief criterion in appraising scientific research and had sanctioned the regrouping of the Academy's research units into larger institutes and the creation of purely technical research

60 Medvedev, n. 26, p. 30.

61 The growth of the Academy of Sciences during the years of industrialisation is evident from the Table II.1 showing increase in its staff and publications.

62 Figurovsky, n. 1, p. 718.

units.⁶³ With the same view, i.e. to ensure a closer contact between the activity of the Academy of Sciences and the requirements of socialist construction, the Academy was transferred in 1934 from Leningrad to Moscow and made directly subordinate to the government of the USSR (Decree of April 25, 1934).³⁴

Under the increased pressure to engage in applied research, the Academy set up many specialized engineering and technological institutes in 1933-34. A new statute promulgated in 1935 emphasised the paramount role of the Academy in paving the way for the establishment of a new socialist classless society.⁶⁵ In order to handle the Academy's applied research tasks, the statute added a new division of Engineering Sciences to its other two existing divisions - those of natural sciences and mathematics and of the humanities.⁶⁶

In 1936 the emphasis was shifted from individual research to complex research projects calling for the participation of many scientists. Krizhanovsky, the then Vice-President of the Academy of Sciences of the USSR,

63 Senior, n. 9, pp. 20-21.

64 Ibid., p. 21; also see Figurowsky, n. 1, p. 719.

65 Senior, n. 2, p. 21.

66 Ibid. Also Nicholas De Witt, "Reorganisation of Science and Research in the USSR", in Norman Kaplan, ed., Science and Society (Chicago, 1965), p. 308.

specified ten leading economic problems that required complex theoretical research and field work on the part of the Academy's institutes - the germ of the idea of the basic directions of science featuring in present-day's planning.⁶⁷ In the same year, to increase the political orientation of the Academy, the most important scientific institution in the nation, a decision was taken by the Party Central Committee and the government to merge the Academy of Sciences with the Communist Academy in Moscow.⁶⁸

The Academy went through another reorganisation in 1938 whereby the number of its divisions were increased to eight; further, in order to broaden the regional base in scientific research it was empowered to supervise the regional academies of sciences set up in the various Soviet Republics, first as branch offices, then as divisions, and, ultimately as quasi-independent union republic academies of sciences.⁶⁹

Some important achievement in the field of science and technology during industrialisation period may be mentioned here. The 15-year electrification plan adopted in 1920 had already been yielding by 1935 two and a half times the planned amount of electricity. In the early 1930s the Soviet Union began to manufacture its own optical

67 Senior, n. 9, p. 21.

68 Medvedev, n. 26, p. 38.

69 De Witt, n. 66, p. 308.

equipment, electric motors, radio transmitters, motor cars and aeroplanes.⁷⁰ During the same period, there emerged a vast new chemical industry in the Soviet Union. The speedy growth of factory laboratories reflected the close connections between Soviet science and industry; many industrial concerns also ran special classes or courses, thus serving as what might be called "university workshops".⁷¹

In the field of pure science, in 1937, the physicist I.E. Tamm and I.M. Frank found an explanation for the so-called "P.S. Cherenkov's effect", fluorescence of some liquids irradiated by gamma rays. This discovery later proved important for laser technology and was awarded the Nobel Prize in 1958. Kapista designed the industrial system for the production of liquid oxygen, hydrogen and other gases. In 1939 K.A. Petrzhak and G.M. Flerov made a fundamental discovery: the fission of uranium nuclei. In 1937 the USSR organised the first successful long-term research expedition to the North Pole.⁷²

70 A.P. Yushkevich and Vassili P. Zubov, "The Soviet Union, 1917-1961", in Rene' Taton, ed., Science in the Twentieth Century (London, 1966), p. 576; the Soviet Union had, in 1927-36, established a modern aviation industry. Many very good technical centres established in this field designed new models of military and civilian aircraft. In 1935-37, Soviet pilots broke many records in aviation. See Medvedev, n. 26, p. 34.

71 Yushkevich and Zubov, n. 70, p. 576.

72 Medvedev, n. 26, pp. 38-39.

Although the Second World War dealt a severe blow to the speedy development of Soviet science and technology, recovery from it was remarkably rapid. In the post-war phase the Soviet policy towards science and technology were guided by two main factors. Though socialism had been achieved by 1936, the productive forces must be developed to a level whereby the non-antagonistic contradictions existing in the society could be removed and a new Communist society would emerge. Secondly, the Soviet Union must be militarily more or as powerful as the Western countries, which was possible only through the development of science and technology in military spheres in particular and in all the spheres in general. The Western countries had already perceived the Soviet Union as a challenge even before the end of the war. By the time the war was over, the germ of cold war had developed between the two systems. With the ensuing of cold war in 1946-47 cooperation between them became increasingly impossible. The directive was clear - Soviet Union must depend on itself for further development of its science and technology; it must build a powerful scientific establishment able to solve all problems by itself and develop all technology which the opposite bloc was capable of doing and make Soviet science in the nearest future not just equal but superior to the scientific achievements outside the Soviet Union. Thus, just after the

war there was a period of intense "scientific nationalism" in the Soviet Union.⁷³

From 1946 onwards practically all branches of military-oriented science and technology received the highest state priorities which improved the position of general science as well. The Academy of Sciences was endowed with new powers and was able to organise several dozen new research institutes. Financial resources for science and technology were increased sharply. The average salary of scientists was doubled or tripled and they were provided with food and consumer goods on a priority basis. The underlying motive was to create a parallel but more productive and more successful socialist science that would represent all branches of science abroad and be the basis for the growth of the socialist economy.⁷⁴

When the two atomic bombs were dropped by the USA in September 1945, Kurchatov's research group already knew the theory of reactors and the possible methods of nuclear explosion. It was due to the inadequate availability of uranium and certain other facilities that real work could not start in this field.⁷⁵ However, by 1949 the Soviet Union had visibly mastered the nuclear technology which

73 Senior, n. 9, p. 21.

74 Medvedev, n. 26, pp. 44-45.

75 Ibid., p. 46.

resulted in the first nuclear explosion by the USSR on 23 September 1949. The deliverable bombs were tested in 1950.⁷⁶

The nuclear technology exerted a great influence on the general development of Soviet science. Radioactive isotopes and radioactive synthetic material became available for experimental work in chemistry, bio-chemistry, physiology and several other branches of science.

These new methods transformed research possibilities more than anything else in the history of science. The use of isotopes was an important factor in the subsequent development of a number of sciences, and resulted in significant growth in many laboratories. The work with isotopes and radiation demanded new knowledge, in physics, bio-physics, statistics, and so on, and thus required a departure from the primitive conditions and experimental anarchy that had prevailed in many laboratories in pre-nuclear times. ⁷⁷

The explosion of hydrogen bomb by the Soviet Union in August 1953 and the analysis of fall-out particles, made by US experts, indicated that the Soviet design involved a fully new approach and which meant a compact deliverable bomb. The USA could reach to this capability only after a half year; during these several months the USSR had potential nuclear military superiority.⁷⁸ In 1954 the

76 Ibid., p. 47.

77 Ibid., p. 48.

78 Ibid., p. 52.

commissioning of the first atomic power station took place in the Soviet Union, followed by the first atomic ice-breaker (the Lenin) launched in Leningrad in 1959. The successful launching of artificial satellites and space probes were further great achievements of Soviet science and technology.⁷⁹

There were other achievements as well in the post-II World War phase in the fields of science and technology. Great strides were made in the design of instruments and the equipment of scientific institutions with physical and physico-chemical instruments of great precision. Soviet physicists and chemists solved most important problems connected with the structure of substances, thereby advancing out knowledge in this important field considerably. Soviet geologists made tremendous achievements in both pure research and practical work, in prospecting for new natural resources and in the theoretical elucidation of mining problems.⁸⁰

As regards the institutional development, in 1949, there began a campaign to strengthen the planning of scientific productivity and to eliminate the useless forms of science that had crept into the Academy of Sciences' work. Various measures were taken to ensure that the Academy

79. Yushkevich and Zubov, n. 70, p. 578.

80. Figurovsky, n. 1, pp. 722-23.

concentrated on practical work and by the early 1950s the division of Engineering (Technical) Sciences had more academicians than the three departments for social sciences and humanities combined.⁸¹

By the late '50s an acute necessity arose to reorganise scientific and technical activities in the USSR. Mostly such activities were concentrated in research institutes in Moscow and Leningrad but existed also in different Academies and institutes in the Republics. The problem was both of over-centralisation and co-ordination. Lack of co-ordination of efforts had led to the study of identical problems by different institutions.⁸²

The debate concerning the Soviet science and research set-up began in July 1955. In February 1956, at the 20th Congress of the Communist Party of the Soviet Union, Khrushchev declared:

The separation of research activity at the Academy of Sciences, departmental research institutes and higher educational establishments can no longer be tolerated. This separation and lack of co-ordination prevent the concentration of research activity on the solution of major scientific and engineering problems, lead to duplication of effort and waste of resources, and retard the introduction of research and engineering achievements into production. ⁸³

81 Senior, n. 9, p. 21.

82 Ibid.

83 Pravda, 14 February 1956, quoted in De Witt, n. 66, p. 310.

In 1956, a number of proposals emanated from the prominent scientists, all aimed at streamlining the research organisation along the lines of consolidating the fragmented, specialised units and breaking up departmental boundaries.⁸⁴

Meanwhile, in 1957 the management of Soviet industry was reorganised, by which some thirty specialised All-Union ministries responsible for the production of such material as oil, chemicals etc. were abolished and about a hundred regional economic councils or Sovnarkhozy, each of which was responsible for most of the production within its areas, were created. This economic decentralisation was accompanied by the setting up of state committees to secure the links and to co-ordinate between industry and the central government. The reorganisation of industry was accompanied by that of scientific activities. A number of departmental research institutes, originally under the Central Ministries in charge of particular branches of the Soviet economy, were transferred to the newly formed regional economic councils or to the State Committees.⁸⁵

Among the State Committees, the most important was the State Planning Committee on Gosplan which was now responsible for the supervision of the major industrial

84 Ibid.

85 Ibid.; also see Senior, n. 9, p. 24.

research and development institutes.⁸⁶ By 1958, 328 industrial research institutes, employing 19,000 researchers were placed under the supervision of the Gosplan. The Gosplan formed a new directorate, the Chief Administration of Research and Project Design Institutes, which was to co-ordinate applied technological research and project design activity in areas not under the jurisdiction of other State Committees. The research and development institutes of other State Committees were to carry on both applied and basic research in areas under their jurisdiction, which included radio-electronics, aviation engineering, armaments engineering, chemistry, ship-building, automation and machine building. The Gosplan together with the Academy of Sciences of the USSR, and in consultation with the state committees was to delineate the latter's research functions and to co-ordinate their research objectives.⁸⁷ In the scientific context, central control was retained through the Presidium of the All-Union Academy, which prepared a list of thirty 'basic directions' of science and proposed to create scientific councils for each basic directions in which scientific research, planning and construction organisations would be represented. It also proposed to appoint a 'Head Institute' to lead work in each direction.⁸⁸

86 The Gosplan has been also the body responsible for the state economic plan. See *ibid.*

87 De Witt, n. 66, pp. 310, 312.

88 Senior, n. 9, p. 24.

In order to speed up the development and introduction of new technology and scientific innovations into industry, a separate State Committee on Science and Technology was established which was responsible for conducting research on the uses of new technology, disseminating technological information and supervising the adaptation of foreign technology.⁸⁹

These institutional reforms in the sphere of science and technology together with the actual development of science and technology in the post-1917 period were mostly responsible for a qualitatively advanced stage of growth of, among other things, science and technology in the Soviet Union.

To conclude, it is obvious that the Soviet Union witnessed a planned and steady, quantitative and qualitative development of science and technology which may be best understood, from a historical view-point, when contrasted to the low and zig-zag development in the Tsarist Russia. The fundamental distinction accrued from the very distinctive and markedly opposite socio-economic political set-ups of the two societies which also decided the place of science and technology in social, economic and political lives of the two societies and their levels of development.

⁸⁹ De Witt, n. 66, p. 312.

In feudal, semi-capitalist Russia the low development of science and technology resulted from this very nature of society, with little initiative to the commercial classes to develop productive forces through new innovations and researches in natural and applied sciences. Dependency on foreign capital and import of technologies further reduced and hindered the growth of indigenous science and technology which would have been a natural result had the country been moving on a fully and indigenous capitalist development. Further, while it did rely on the local but weak capitalist class (which too depended on foreign capital), the political power's considerable compromises with feudal classes and foreign capital greatly discouraged and barred its important initiatives to invest in the development of science and technology for independent economic development of the country.

The Socialist Revolution of 1917, on the other hand, ushered in a new socio-economico-political system. The new society put before it the task of an independent self-reliant economic development and a far-reaching, progressive and radical transformation of the social structure. The socialist road to development by itself, as also the need to overcome the economic, social and cultural backwardness (the legacy of the old society), and also the defense

needs of the country surrounded by powerful hostile states, demanded the strengthening of the country's scientific and technological capacity as the most important prerequisites. Interlinked as science and technology are with the socio-economic system, the new society on its part provided favourable climate for the growth of science and technology.

As the new proletarian state took upon itself the task of organising and directing the social and economic life, science and technology too passed, for the first time from the realm of mostly private hands into that of the Soviet state and were made part and parcel of the Soviet model of organizing society and the economy. Consequently, we find the level of development of Soviet social economic and political life corresponding to that of science and technology. Both interacted and influenced each other in an integral way.

Despite their initial and partial dependence on the capitalist elements at home as well as on the capitalist world outside (the dependency was not, unlike the Tsarist state, on terms and diktats of domestic capitalist elements or of the external capitalist world), the main thrust of the Soviet science and technology was to create their own indigenous infrastructure and self-reliant but rapid

development. The Soviet state took various initiatives and created necessary mechanisms to this effect.

The conscious and planned organisation and development of science and technology by the Soviet state enabled it to catch up fully with the scientific and technological capabilities of the West. By the late 'fifties when the West was resurging with new scientific researches and technologies in the fields of atomic, nuclear energy, space, automation and cybernetics, the Soviet Union did not lag behind. Unlike the capitalist world which were planning to use these new achievements of modern science and technology to maximise the profits of a few monopoly capitalist class, the Soviet Union was, however, examining the theoretical and practical intricacies and possibilities of these achievements to put them on the door steps of the mankind, especially of the Soviet people for their further benefit and advancement on the road of, among other things, greater prosperity, social and economic equality and democracy.

TABLE II.1

GROWTH OF STAFF AND PUBLICATION OF ACADEMY OF SCIENCES
DURING INDUSTRIALISATION PERIOD

Year	Total Staff of the Academy	Scholars among the staff	Printed matter (in quires)
1918	220	109	697
1925	873	363	940
1932	2,143	1,021	2,809
1935	3,881	1,775	4,700
1937	5,954	2,719	7,295
1941	10,213	4,582	12,773

Source: Materials for a History of the Academy of Sciences in the USSR, 1917-1947 (Moscow, 1950), pp. 304, 448 (in Russian) cited in N.I. Figurovsky, "The Interaction between Scientific Research and Technical Invention in the History of Russia", in A.C. Crombie, ed., Scientific Change: Historical Studies in the Intellectual, Social and Technical Conditions for Scientific Discovery and Technical Invention, from Antiquity to the Present, Symposium on the History of Science (London, 1963), p. 719.

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CHAPTER III

THE SCIENTIFIC-TECHNOLOGICAL REVOLUTION AND THE SOVIET SOCIAL STRUCTURE (1959-1980)

The Scientific-Technological Revolution in the Soviet Union

Initially, the Soviet scientists and the party ideologists were skeptical about and hostile toward the new science of Cybernetics. The first mention of cybernetics was made at about three months after Stalin's death, with the publication of an article entitled "Whom Does Cybernetics Serve?" in the Soviet professional journal Voprosy Filosofii in 1953. The author, under the pseudonym 'Materialist', defined the subject as a "bourgeois pseudo-science serving the American millionaires and imperialists, and destined to perish with the inevitable downfall of imperialism itself".¹

¹ Gerald Segal, "Automation, Cybernetics, and Party Control", Problems of Communism (Washington), vol. 15, March-April 1966, p. 7. "It should be noted that he condemned only the overall theories of cybernetics and not the theory and design of electric computers which were in increasing demand in the Soviet Union. He said, cybernetics had gone well beyond the legitimate claims of computer theory, extending their science to tackle problems not only in telemechanization but in biology, physiology, psychology, sociology, economics, and politics". See Lee Kerschner, "Cybernetics: Key to the Future?", Problems of Communism, vol. 14, November-December 1965, p. 59.

Such attack on cybernetics and other pressures, i.e. ideological restrictions against it, had only a mild effect on extensive research in computers and computer technology. Practically, Soviet research in cybernetics and associated fields went on steadily and it was not long before pragmatic considerations forced the Soviets to undertake a reassessment of the role of cybernetics and concomitant theoretical adjustments.² The task was assigned (by the Communist Party) in 1955 to Ernest Kolman, a theorist who had made his reputation in mathematics and the philosophy of science.³

Kolman joined the 'Materialist' in criticising the uproar surrounding cybernetics in the United States as an attempt to sell it as a universal science capable of replacing psychology and the social sciences and in scoring the contention that automation and electronic computer could wholly replace the mental work of man. He attacked the 'reactionaries' (meaning Americans) for using cybernetics to 'refresh bourgeois sociology and idealist philosophy', in order to give them 'some semblance of science'. Kolman, however, reproached 'Materialist' for approaching cybernetics one-sidedly and thus obscuring the positive side of the picture. He concluded that cybernetics had been tested in practice and had exceptional significance for the future

2 Kerschner, *ibid.*, p. 60.

3 *Ibid.*

of society; that the initial 'nihilistic' attitude toward cybernetics had caused great setbacks to Soviet progress.⁴

This positive assessment led to a rapid development of cybernetics and other associated sciences in the late 'fifties and later. This is evident from the fact that as early as in 1959 a scientific council for co-ordinating work in the new science, i.e., cybernetics, was set up under the USSR Academy of Sciences.⁵ The year of 1959 marked a further development in Soviet science and technology. By then, computers were used to solve only individual calculation tasks, e.g., determining a factory's need for materials of one kind or another. There was no system or model of interconnections among the indices sought. The norms for labour expenditure, materials and other data were fed into the computer separately and manually for each computation job, which took an enormous amount of time. In 1959 the technique was found to introduce into the computer the entire mass of information and norms for an enterprise. This made it possible to solve various problems of identical economic nature on the basis of a foundation of data fed to the computer once and for all. It also sharply reduced the labour outlays associated with introduction of normative data into the computer and considerably increased both the

4 Ibid.

5 Ibid., p. 65.

savings they made and interest in creating automatic control systems.⁶

As a result of these and similar developments, by the end of 1950s cybernetics and allied sciences and technologies had secured its proper place in Soviet science and technology; Soviet theory and technique (though not hardware) were on a par with those of the Western world.⁷

It was in the background of this new Scientific-Technological Revolution that the Extraordinary Twenty-First Congress of the Communist Party of the Soviet Union was held in 1959. It examined and endorsed the basic directions of the Seven-Year Plan of Development of the National Economy (1959-1965).

The chief feature of this plan was reflected in the concept of "building the material and technical base of Communism in the USSR". The concept implied, "first and foremost, a highly developed, modern industry, total electrification, scientific and technical progress in every branch of industry and agriculture, comprehensive mechanisation and automation of all production processes, maximum utilization of new power sources and our rich natural resources, new synthetic and other materials, a higher cultural and technical level of the people, further improvement in the organization

6 A. Pokrovskii, "The Development of Automatic Control Systems in the USSR", Soviet Law and Government (New York), vol. 15, no. 2, Fall 1976, pp. 4-5.

7 Kerschner, n. 1, p. 63.

of production, and higher labour productivity."⁸ It was envisaged that with the expansion of productive forces, socialist production relations would reach higher levels too. The extension of socialist production 'on a new material and technical base' and the consequent expansion of education, since education is closely linked with productive labour, would lead gradually to disappearance of the essential distinction between mental and physical labour. The all-round development of people would transform labour into man's prime want. This would be facilitated by the inevitable reduction of working hours and further improvement of working conditions. "When every branch of industry is automated, when man becomes the master of the machine, he will have to devote less time and energy to producing the things he needs. Labour which at times is still arduous and tiring, will become a source of joy and pleasure for a harmoniously developed healthy person."⁹

Though the Twenty-First Congress of the CPSU did not expressly^{ed} mention of cybernetics, it may be assumed to be implied in the concept of 'material and technical base of communism'. In any case, the new programme of the CPSU adopted at Twenty-Second Party Congress in 1961 gave it an official approval. It stated that "cybernetics, electronic

8 N.S. Khrushchev, Report to the 21st Extraordinary Congress of the CPSU on Target Figures for the Economic Development of the USSR for 1959-1965 and Concluding Speech (New Delhi, 1959), p. 90.

9 Ibid., p. 91.

computer and control systems will be widely applied in production processes in industry, building and transport, in scientific research, planning, designing, accounting, statistics and management",¹⁰ in order to create and promote the material and technical basis of Communism.

Soviet Social Structure (1959)

The 1936 Constitution of the Soviet Union formulated Soviet social structure as consisting of two non-antagonistic classes of the peasantry and the working class and a 'stratum' of intelligentsia. In his notable work 'Economic Problems of Socialism in the USSR' written in 1952 Joseph Stalin¹¹ further explained various dimensions of Soviet social structure. Here he pointed out, among other things, the prevailing distinctions or the antithesis between town and country, between the peasantry and the workers, between physical and mental labour and so on; and the ways of their elimination.

The economic basis of this antithesis is, according to Stalin, the exploitation of the country by the town, the expropriation of the peasantry and the ruin of the majority of the rural population by the whole course of development of industry, trade and credit, of physical workers by mental

10 Quoted in Kerschner, n. 1, p. 65.

11 J.V. Stalin, Economic Problems of Socialism in the USSR (Moscow, 1952).

workers under capitalism. With the abolition of capitalism and exploiting system, and with the consolidation of the socialist system this antagonism of interests between different sectors and strata was but bound to disappear. The working class in alliance with the peasantry was able to overthrow the Tsarist autocracy and to eliminate the landlords and kulaks and capitalists. The working class throughout had helped the peasantry in getting over different problems. Thus it supplied the peasantry with tractors and other agricultural machineries to increase the productivity of the collective-farm. This further strengthened the friendship between the two. Although the peasantry and the working class remained two classes in terms of the relation to the means of production and the resulting economic, social and political consequences, there was no antagonism or enmity between the two, and thus constituted 'non-antagonistic' classes. This is also true in case of the physical and the mental workers (intelligentsia) who were members of a single collective body of producers, vitally interested in the progress and improvement of the production.¹² The distinctions between social groups, however, still continued and could not be overlooked.

Analysing the causes of distinctions between agriculture and industry, Stalin referred to the different

12 Ibid., p. 31.

conditions of labour in agriculture and to the fact that whereas in industry public ownership of the means of production, of the product of industry prevailed, in agriculture, it was not public but group, collective farm ownership. This fact led to the preservation of commodity circulation (exchange through purchase and sale) in order to ensure an economic bond between town and country, between industry and agriculture, because this was the only form of economic tie with the town which was acceptable to the peasants. This distinction, however, did not include state-farms where the means of production were national or rather state property.¹³ This was in contrast to the collective farm where "although the means of production (land, machines) do belong to the state, the product of production is the property of the different collective farms, since the labour, as well as, the seed is their own, while the land, which has been turned over to the collective farms in perpetual tenure, is used by them virtually as their own property in spite of the fact that they cannot sell, buy, lease or mortgage it."¹⁴ The consequence of such position was that the state could dispose only of the products of the state enterprises (including state farms), the product of the collective-farms, being their property could be disposed of only by them. As the latter was prepared to alienate their product

13 Ibid., p. 19.

14 Ibid.

only in the form of commodities in exchange for what commodities they desired to receive from the towns.¹⁵ Thus the commodity relations was the crux of the problem as far as distinctions between industry and agriculture and between state sector of agriculture and collective sector of agriculture were concerned. To remove these distinctions, the necessity was to have an all-embracing state production sector which involved certain prerequisites as Stalin ruled out the possibility of simply "swallowing up of the collective-farm sector by the state sector",¹⁶ The solution lay in the high productivity of collective-farm sector and the technical and cultural upliftment of the peasants.

Elimination of the distinctions between manual and non-manual labour too required high technical and cultural level of the workers to that of the technical personnel - a process which was set in motion by Stalin in course of industrialisation. Stalin also noted the distinctions among workers in different branches of industry due to different conditions of labour: "...the conditions of labour, for example, of coal miners differ from those of the workers of a mechanised shoe factory, and the conditions of ore miners from those of engineering workers...."¹⁷

15 Ibid., p. 20.

16 Ibid.

17 Ibid., p. 33.

The above study shows the clear-cut conception of social structure in the Soviet Union presented by Stalin - a conception which has been accepted by his successors and on the basis of which the latter have proceeded to lay the material and technical prerequisites for the successful solution of the major socio-economic problems associated with the obliteration of essential distinctions between town and country, between mental and manual labour and ultimately, with the elimination of all class and social distinctions between people.

The STR and Soviet Social Structure : 1959-1980

The STR has influenced the social structure of the Soviet Union in two interconnected ways: first, as a direct productive force; and secondly, by transforming the subjective elements of the productive force, i.e., the labour. As we shall see later in this chapter there are many other intermediary processes as well involved in the above two.

The STR and Growth of Productive Forces and Content of Labour

As a productive force the STR has contributed to the growth of production in both industry and agriculture. It has brought about radical and deep-going changes, both qualitative as well as quantitative, in the means of labour

through mechanisation and automation processes of the production. It has brought into being many new industries. It has also helped in various discoveries, research and technological innovations that have contributed to the improvement of the means of production and have provided the industry and agriculture with new sources of energy, raw materials and other production processes like rational and scientific organisation of labour, management, planning etc. A large number of machines, installations and instruments of various types have been designed and are in use, many of them unique, the first of their kind in the world.¹⁸

Available figures indicate that by 1981 the Soviet Union had more than 170,000 mechanised flow and automatic lines in operation and about 70,000 units of "program-controlled" equipments; and 90,000 of totally mechanised and automated sections, shops and production facilities. In comparative terms, the number of fully mechanised and automated enterprises increased from 1,906 in 1965 to 5,383 in 1975 and 6,389 in 1979. Since 1972 roughly 2,000 automated lines are being introduced every year. Soviet industry has also been increasingly taking out of

18 L. Brezhnev, "Report of Central Committee of the Communist Party of the Soviet Union to the 23rd Congress of the CPSU" in 23rd Congress of the Communist Party of the Soviet Union (Moscow, 1974), p. 341.

operation obsolete designs of machinery, instruments and production (345 in 1965; 804 in 1970; 1,746 in 1975; 7,255 in 1976-79; or an average of 1,846 a year). This trend has been accompanied with that of the development and commission of new types of machinery, themselves the result of new inventions and innovations in the Soviet economy. For instance, the number of inventions introduced, rose from 58,000 in 1971-75 to 94,000 in 1976-80. The figures for innovations were 18.5 million and 20 million respectively. In view of this increasing comprehensiveness of the mechanisation and automation of production, the share of the "active part of means of labour" directly influencing the growth of output in fixed productive capital has tended to grow.¹⁹

The effect of all these has led to a particular feature in the formation of the growth rates of production in the Soviet Union in the recent years. It emphasises

19 A. Notkin, "Intensification and the Effectiveness of Expanded Reproduction", Problems of Economics (Washington), vol. 25, no. 5, September 1982, p. 7; Yuri Volkov, Social Development of Soviet Society: Problems and Prospects (Moscow, 1983), p. 104; P. Lopata, Communism as a Social Formation (Moscow, 1983), p. 115. For details see Tables III.1, III.2, III.3 and III.4. By the early eighties, the following operations were completely mechanised; loading at coal mines, extracting and delivery of coal in coal-faces; trucking coal and rock; removing ore and rock at ferrous metal mining enterprises, cutting and transporting wood, and most of the field work in agriculture. Besides 75 to 99.5 per cent of all construction works and over 89 per cent of all operations at livestock farms and other agricultural enterprises had been mechanised. See Volkov, *ibid.*

the intensification of the economy (i.e., the raising of of labour productivity and the lowering of the fixed capital-output ratio, the materials-output ratio, the power-output ratio, and the investment-output ratio, coupled with the enhancement of the quality of products). This is in contrast to the factors of an extensive nature such as growth of expenditures of labour, capital investments, natural resources and sown areas, which earlier played the major part in economic development.²⁰

The high rate of low-cost production of various goods has increased the national income as a result of which the per capita income has grown and the standard of life of average individual of different classes and groups has risen. High inequality in income with which to a great extent the 'style of life' is associated, and which marked a high differentiation between different classes and strata of the people in the period of the building and

20 P. Khromov, "Labour Productivity and Economic Growth", Problems of Economics, vol. 25, no. 4, August 1982, p. 6. For detailed content, analysis and aspects of intensification of production in the Soviet Union, see also S.A. Kheinmann, "The Intensification of Production and Technical Policy in the Eighties", Problems of Economics, vol. 25, no. 1, May 1982, pp. 47-62; Notkin, n. 19, pp. 8-22; V. Krasovskii, "Intensification of the Economy and the Time Factor", Problems of Economics, vol. 25, no. 10, February 1983, pp. 34-50, and L. Abalkin, "Conversion of the Economy to the Intensive Path of Development", Problems of Economics, vol. 25, no. 10, February 1983, pp. 51-70.

consolidation of socialism has been reduced.²¹ Steps have been taken to favour the people at lower scales of income. In proportion to other classes and strata of the people, they have been provided with more salary and other material benefits. For instance, as the class of peasantry has been the most disadvantageous class, its income and other material benefits have been increased more than other groups. This is evident from the following figures of the growth of productive forces and distribution of material goods accruing from it to the population in large.

The relationship between these figures and the STR cannot be absolute. It however signifies the important contribution of the STR to the development of the means of production, to the content and modernisation of labour and of the scientific reorganisation of economy which are the basic factors behind the tremendous growth in productive

21 The differentiation however is being reduced at a higher standard of life since the social requirements themselves have changed for the better. Under the conditions of the STR "broad electrification, mechanisation, automation, chemicalisation and cybernization radically alter man's home life". Consequently, new mix and quality of food preparation and preservation, cleaning and control of devices, clothing maintenance, health care and cultural and recreational devices, among others, are being produced, and these tend to be distributed on the basis of egalitarianism. For a comprehensive discussion see I. Rakhlín, "New Technology and Personal Consumption (The Socio-economic Aspect)", Problem of Economics, vol. 25, no. 3, July 1982, pp. 21-38.

forces in general, and the consequent increase in social wealth and distribution to the different classes and strata of society.

Due to large-scale introduction of the latest achievement of the STR combined with other economic measures, industrial sector fulfilled its Seven Year Plan target ahead of schedule. By the end of the Plan in 1965, the Soviet Union's industrial capacity was nearly doubled. Some 5,500 large industrial enterprises were built and 30 giant power stations were placed in operation during this period. The world's largest power complex, the Bratsk Hydropower Station began its operation at full capacity.²²

The mechanisation level of agriculture rose considerably. In 1959-65 the number of tractors at the collective and state farms increased by nearly 600,000, of self-propelled harvest-combines by 200,000 and of lorries by nearly 300,000.²³ Consequently, the last years of the Plan saw an appreciable increase in the rate of agricultural production of the output of grains and industrial crops, and of the livestock population.²⁴ In the same period, the national income used for accumulation and consumption

22 Y.I. Buyayev and others, A Short History of the Communist Party of the Soviet Union (Moscow, 1974), p. 341.

23 Ibid., p. 342.

24 Ibid., p. 341.

increased by 53 per cent, industrial production by 84 per cent. The basic assets of the economy increased by 92 per cent. Industrial enterprises exceeded their output target to the tune of 46,000 million roubles. There was also a substantial increase in the output of foodstuffs and items of cultural use.²⁵

In the five year periods between 1960-1965, the social product increased by 35 per cent and the gross industrial output by 50 per cent. The increase in industrial output over these years amounted to 79,000 million roubles.²⁶ This represents three and a half times increment during all the pre-war Five Year Plan periods.

The growth of production was accompanied by an increase of social wealth. This allowed the state to take a series of measures to improve the standards of living of the workers, peasants and intelligentsia - of all the working people. During 1959-1965 wages of the personnel in the state sector rose as did the incomes of the collective farmers. More wages were paid out from the social consumption funds. For the country as a whole, the wages of industrial and office personnel went up from an average of 78 roubles in 1958 to 95 roubles in 1965. Together with the payments and benefits accruing to them from the social

25 Brezhnev, n. 18, p. 59.

26 Ibid., p. 65. Also see Table III.6.

consumption funds, the wages rose from 104 to 123 rubles. The salaries were raised for people employed in the public services, including educational, health, cultural and retail trade workers, and people employed in the housing and community services. Guaranteed pay as well as old age and disability pensions were introduced for the collective farmers at the beginning of 1965.²⁷

In the Soviet society, social consumption funds play an important role in raising the people's standard of living. Payments and benefits received out of it amounted to 41,500 million rubles in 1965 as against 27,300 million rubles in 1960. These funds were spent on increasing the pensions and on the additional benefits granted to war invalids and the families of soldiers and officers killed in the war.²⁸ More investments were made in educational sphere. Consequently, more than 70 million people were attending tuition-free general vocational, specialised secondary and higher educational establishments, schools and colleges by 1965. The number of hospitals, polyclinics,

27 Bugayev and others, n. 22, p. 342; Brezhnev, n. 18, p. 98; A. Kosygin, Report on the Directives for the Five-Year Economic Development Plan of the USSR for 1966-1970 in 23rd Congress of the Communist Party of the Soviet Union (Moscow, 1966), p. 174; P. Simush, "Social Changes in the Countryside", Soviet Law and Government, vol. 16, no. 4, Spring 1978, p. 67.

28 Brezhnev, n. 18, p. 98.

sanitorial and holliday homes rose steadily during 1960-1965.²⁹ During 1959-1965, a total of 17 million flats and individual homes (or 40 per cent of housing available in the country by 1959) were built.³⁰ Prices were reduced for woollen, silk and linen textiles, some articles of clothing, ready-made children's clothes, clock and watches, bicycles, photo cameras, medicines and for some other consumer goods.³¹ As a result, during this period, consumption of the people increased considerably and the sale of goods through the state and co-operative retail network increased by 60 per cent.³²

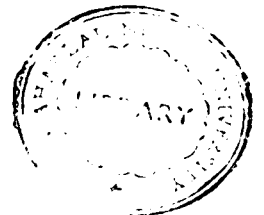
During the Eighth Five Year Plan period (1966-1970), heavy industry, the basis of the economy further developed. The branches which determine technical progress - electric power, the chemical and petrochemical industries, engineering, especially radio electronics and instrument-making developed at a much faster rate. The share of the products turned out by these branches increased from 28 to 33 per cent of total industrial output. The light and the food industries also developed rapidly. The new and more complex

29 Ibid., p. 99.

30 Bugayev and others, n. 22, p. 342.

31 Brezhnev, n. 18, p. 98. Reduction of retail prices of goods followed their increased output and the growth of the productivity of labour.

32 Kosygin, n. 27, p. 175.



machinery - powerful tractors, harvester combines and lorries - were supplied to the countryside.³³

During the same period, the national income grew by 41 per cent, industrial production by 50 per cent. The national income which went into consumption and accumulation increased at an average rate of 7.1 per cent a year, as against 5.7 per cent in the preceding period (1961-65). Productivity of social labour in general increased by 37 per cent as against 29 per cent in the Seventh Five Year Plan period. The output of consumer goods went up by 49 per cent. Annual average farm output increased by 21 per cent as compared with 12 per cent in the preceding five year period. The annual average gross output of grain increased by 30 per cent.³⁴

During 1966-1970, real income per head of population increased by 33 per cent as against 19 per cent in 1961-1965. The minimum wage for workers and office employees for the country rose by 26 per cent. Collective farmers' incomes from social production increased by 42 per cent. Social consumption funds increased by 50 per cent to almost 64 thousand million roubles. Social welfare measures during this period include lowering of pension age, creation of five-day work week with two days off, paid annual leaves

33 Report of the CPSU Central Committee to the 24th Congress of the Communist Party of the Soviet Union (Moscow, 1971), pp. 41, 87.

34 Ibid., pp. 41-42.

having been lengthened for a considerable part of the working people. On the housing front, the state spent nearly 60 thousand million roubles. More than 500 million square metres of housing were put up which made an equivalent of more than 50 large cities with one million population. The growth of retail trade, which is a key indicator of the level of living standards, was 48 per cent higher than the preceding five year period, with the structure of consumption being considerably improved. As against 1965, consumption per person of meat increased in 1970 by 17 per cent, of milk and milk products by 22 per cent, eggs by 23 per cent, fish and fish products by 33 per cent and sugar by 14 per cent, with a simultaneous reduction in the consumption of bread and potatoes. The sale to population of cultural and household articles, especially of cultural and household articles, especially of consumer durables like radios, television sets, washing machines, refrigerators etc. increased considerably.³⁵

During the Ninth Five Year Plan period (1971-1975) the heavy machine-building industry increased production by 73 per cent. This made it possible to raise the mechanisation, automation and technical level of production. There was a substantial increase in the manufacture of machine-tools, forge and press equipments, and automated

³⁵ Ibid., pp. 43-44.

production lines. The output of cars more than doubled. The production of farm machinery increased by 78 per cent, of instruments and means of automation by 90 per cent and of computers by 330 per cent.³⁶ Nearly a thousand new light industry and food industry enterprises were built during the same period. Compared with 1970, the basic assets increased by 50 per cent, total industrial output by 43 per cent and production of consumer goods by 37 per cent. During this period, the countryside was provided with 1,700,000 new tractors, 449,000 grain harvestors, 1,102,000 trucks and a large quantity of other equipments. By 1975, almost all collective-and-state-farms were electrified and got their electricity mainly from state operated power stations. All this substantially contributed to increments in the average annual output of agricultural products which was 13 per cent higher than the Eighth Five Year Plan period.³⁷

The most generalised indicator of the enhancement of production during 1971-1975 was the accelerated growth of labour productivity which accounted for 84 per cent of the industrial output, 78 per cent in construction, and the entire increment in agriculture. This was "the result of

36 A.N. Kosygin, "Report on Basic Orientations of Economic Development of the USSR for 1976-1980", in Twenty-Fifth CPSU Congress: Documents and Resolutions (New Delhi, 1976), p. 101.

37 Ibid., pp. 102-4; L.I. Brezhnev, "Report of CPSU Central Committee to the 25th Party Congress", in Twenty-Fifth CPSU Congress, n. 36, p. 49.

the higher qualifications acquired by the working people and of increase in technical equipment made available to industry. The economy absorbed 9,300,000 (recent) graduates of the vocational and technical schools and more than 9 million specialists with a higher or secondary specialised education. Nearly 40 per cent of basic production assets in industry and 56 per cent in agriculture have been renewed (replaced or renovated) during this period."³⁸

In the Ninth Five Year Plan period, the national income rose by 34 per cent higher than in the Eighth Five Year Plan period. Of the total, 75 per cent went into consumption and the rest into accumulation. The consumption fund and accumulation resources allocated for housing, the construction of schools, hospitals, cultural educational and sports installations and municipal and every day services for the population, constituted more than 80 per cent of the total national income that was used directly for purposes of raising the people's living standards. The share of the national income allocated for consumption was higher than in the preceding five year period.³⁹

As for the living standards, the funds allocated for the implementation of new social measures equalled the total sums invested during the preceding five year periods

38 Erezhnev, n. 37, p. 35.

39 Kosygin, n. 36, p. 101.

taken together. The population's real per capita income rose by almost 25 per cent. Compared with 1965, in 1975 the number of people with a monthly income of 100 rubles or more per member of a family grew eight-and-a-half times.⁴⁰ Main emphasis, however was put especially on raising the living standards of those in the lower income brackets. As a result, the average monthly cash wages of industrial and office workers was increased by 20 per cent reaching 146 rubles, and this together with the payments and benefits out of social consumption funds, amounted to 193 rubles a month. Labour remuneration among collective farmers was raised by 25 per cent. At the same time, the minimum wages, pay rates and salaries of middle-bracket industrial and office workers in the branches of material production all over the country was increased. The income of some categories of workers in the non-productive sphere was also increased. Old-age and disability pensions for industrial and office workers, collective farmers and military men, as well as the scholarships and allowances paid to the students at higher schools and pupils in specialised secondary schools and technical colleges were also raised.⁴¹ In the field of education, the transition to universal secondary education was, in the main, completed.⁴²

40 Brezhnev, n. 37, p. 35.

41 Kosygin, n. 36, p. 101.

42 Ibid., p. 102.

Intensive and massive housing construction was carried out during this period. More than 11 million flats and individual houses were built, totalling 544 million square metres of housing space. This helped to improve the housing conditions of 56 million Soviet people, and made it possible to move on, in the main, to the distribution of new housing on the basis of one family-one-flat principle.⁴³

The trends observed during 1959-75 period have since continued. Further impetus was provided to the development of science and technology; new technology was introduced into the economy on a larger scale and the technical levels of production were raised.⁴⁴ Consequently, there was still more development or establishment of the most advanced industries, such as nuclear engineering, space technology, electronics and microelectronics, microbe synthesis and so on during the Tenth Five-Year Plan period (1976-80).

Works were undertaken to build new territorial-complexes all over the country.⁴⁵ Especially, the nation's

43 Ibid.

44 "Main Results of Economic Development and of Improvement of the Well-Being of the People in 1976-80", in 26th Congress of the Communist Party of the Soviet Union: Documents and Resolutions (Moscow, 1981), p. 159.

45 L. Brezhnev, "Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union", in 26th Congress of the Communist Party, *ibid.*, p. 43.

largest fuel and energy base was erected in "the harsh conditions" of Western Siberia. Moreover, due to the development of the STR both in scope and depth "the very appearance of many lines of production and whole industries" changed.⁴⁶ In the sphere of agrarian sector, while, on the one hand, capital investments were raised; on the other hand, advances were made in the "chemicalisation, overall mechanisation and industrialisation of crop and livestock farming" and also in more intensive farming techniques - requiring fewer people.⁴⁷

As a result of these and other factors, the Soviet economy during 1976-80 grew over and above that till 1975. Thus, compared with the Ninth-Five-Year Plan period, industrial production rose by 717 billion roubles, agricultural production by 50 billion roubles, and national income by 400 billion roubles in the Tenth Five-Year Plan period. Such intensive factors as the scientific and technological progress and improvement of management, among others, were largely accountable for these achievements. Thus, the increase in the productivity of social labour (by 17 per cent) accounted for 76 per cent of the increase in agricultural production, and for 95 per cent of the

46 Ibid., p. 42.

47 Ibid., p. 45.

increase in construction and assembly work in the building industry.⁴⁸ Though the average growth rates of productivity of social labour in different sectors during the Tenth Plan were lower than those in earlier few plans, it should be noted that the former were a further advancement over the latter. Hence, an all-round growth in all the sectors in absolute terms. For instance, national income in 1976-80 was 24 per cent higher over 1971-75.⁴⁹

Coming to social impact of this growth, there were major achievements in addition to an improvement in the quality of output. According to an estimate, in 1976-80, over 1.6 trillion roubles, i.e. approximately the same as spent under Seventh and Eighth Five-Year plans combined, and 334 billion roubles more than Ninth Plan, were spent directly on improving the people's life-standard.⁵⁰

The policy of bringing the relatively less developed classes and strata in particular to higher level

48 Main Results of Economic Development, n. 44, pp. 158-60; G. Sarkisian, "Economic Growth and the People's Well-Being", Problems of Economics, vol. 25, no. 1, May 1982, p. 6.

49 Khromov, n. 20, pp. 7-8. For details see Tables III.5, III.7, III.8 and III.9.

50 Sarkisian, n. 48, p. 4; Main results of Economic Development, n. 44, p. 160. The amount spent on people's well-being during 1976-80 amounted to 75.3 per cent of the national income. Brezhnev, n. 45, p. 57.

through the policy of preference to them continued through the Tenth Plan. Consequently, although real incomes per capita grew by 18 per cent, and the average wages of factory and office workers by almost 16 per cent, the remuneration of collective farmers were increased by 26 per cent. Among the workers, those in such key industries as ferrous and non-ferrous metallurgy, coal textiles, construction, agriculture and the railways were main beneficiaries. Then, wages and salary rates were also increased for all workers in non-production spheres.⁵¹

The pool of social consumption funds increased during 1976-80, amounting to 527 billion roubles. In 1980, payments and benefits from these funds per head of the population was 438 roubles as against 354 roubles in 1975. The benefits included the raising of the pensions of collective farmers and certain categories of workers, among others.⁵² Due to these measures, the consumption of food and non-food commodities increased. Thus, the retail trade turnover in the five years went up by 24 per cent and the volume of consumer services by 43 per cent. In the field of housing, significant investments were made as a

51 Main Results of Economic Development, n. 44, p. 160; "Economic Growth and the Growth of the People's well-Being in the Period of the Tenth Five-Year Plan", in 26th Congress of the Communist Party, n. 44, p. 110.

52 Main Results of Economic Development, *ibid.*

result of which more than 50 million people had their housing conditions improved. For example by 1980, about 80 per cent of the urban population lived in separate flats.⁵³

In the field of education, further promotional measures were adopted. Hence, during 1976-80, 12.5 million young people learned trades at vocational training schools, and higher and specialized secondary schools trained about 10 million specialists. Similar improvement took place in the sphere of health care; for instance, the number of doctors rose from 834,000 in 1975 to one million in 1980, that of hospital beds per 10,000 inhabitants, from 118 to 125.⁵⁴

To sum up, the growth of productive forces brought about radical changes in the living standards of the Soviet population as a whole and contributed to the process of evening up of the components of Soviet social structure.

The average monthly pay of collective farmers in 1972 was 92 roubles - which represented an 80 per cent increase between 1965-75 - and it reached three fourths of the wages of state-farm workers. If earnings from private garden plots is included in the incomes of collective farmers to those of state farm workers and white collar

the ratio of the per capita incomes of collective farmers

53 Ibid., p. 161.

54 Ibid.

personnel was more favourable for the former - 9 to 10.⁵⁵ The incomes of state farm personnel as a share of those of workers and office staff in industry rose from 74 per cent in 1965 to 80 per cent in 1975.⁵⁶

A study in the average monthly wages and salaries of workers and office employees (according to industries) between 1940-1972 undertaken by Semyonov leads to the following conclusions. First, since 1960 the average monthly wages of workers in industry and construction were higher than the average wages and salaries of all workers and office employees in the Soviet economy. Secondly, the wages of workers which in 1940 were less than the salaries of office employees in the above-mentioned industries have, since 1960, exceeded the salaries of the latter. The increase for agricultural workers has been in effect since 1970. Thirdly, the gap between the general average monthly wages of the worker and the average monthly salary of engineers and technicians narrowed considerably (regardless of the industry). Thus, in 1940 industrial and construction workers received 50 to 60 per cent less than engineers and technicians, in 1972 they began to receive 30 per cent less and agricultural

55 Simush, n. 27, p. 67.

56 Ibid., pp. 67-68.

workers about 40 per cent less. Finally, since 1960 the wages of industrial and construction workers have exceeded the salaries of civil servants.⁵⁷

According to another estimate, between 1970 and 1979, the earnings of state farm workers and employees increased by 45 per cent while the wages of collective farmers increased by 52 per cent, that is, 2 to 3 times more rapidly. Then, in 1965, the wages of engineering and technical personnel were on the average higher than those of workers in industry by 45.9 per cent; in construction by 48.2 per cent; in 1970 by 36.3 and 34.7 per cent respectively; and in 1979 by only 15.9 and 4.3 per cent respectively.⁵⁸ Another significant fact in this context is that by the end of 1980 "nearly half of the population had a monthly income of over 100 roubles per member of the family; in 1970 such an income was earned by only 18 per cent of the population".⁵⁹

The operation of new machineries and production processes in industry, agriculture and service sector as introduced in the wake of the STR requires highly skilled workers which has influenced different aspects of Soviet social structure. Though technical professions did appear

57 V. Semyonov, "Evening-up of the Social Status of the Working People in the USSR", Social Sciences (Moscow), vol. 6, no. 3, 1975, pp. 112-13.

58 Sarkisian, n. 48, p. 18.

59 Economic Growth and the Growth of the People's Well-Being, n. 51, p. 110.

in the countryside during the first years of collectivisation and later (tractor-drivers, combine operators, agronomists and others), notable feature of today's mechanisation and automation brought about in the wake of the STR in the countryside is the emergence of electricians, mechanics, controllers, automatic production process operators and computer operators who are also engaged in agriculture side by side with engineers and technicians and workers in industrial enterprises and service sectors.

It is imperative to see briefly the impact of the STR through the growth of productive forces and through the transformation of the content and process of labour. On three important social classes and stratum of the Soviet society, namely, the peasantry, the working class, and the intelligentsia, separately.

The STR and Peasantry

As noted above, under socialism, the Soviet society retained contradictions among different classes and groups; between the workers and the peasants, between town and country, between mental labour and manual labour and so on. Notable among these was the class distinction between the workers and the peasants, from which, to a large extent, other contradictions resulted. The former has been

associated with the two forms of property - state and collective farm property - and has manifested itself in the area of work, content of work, consumption pattern, socio-occupational structure and the spiritual realm. In the solution of these problems, the main part is to be played, as the CPSU programme of 1961 noted, by the development, the rapprochement and, in the course of time, the fusion of collective-farm, co-operative property with the property of the whole people in a single, integrated form of Communist property. The key to this rapprochement lies in the economic growth of the collective-farms, in the development of the productive forces in the countryside, in the socialisation of production in the collective farms and the modern scientific and technical skills of the rural people, most importantly, among the people directly associated with the agricultural production in the collective farms.

The practical solution of this task presupposes the creation of a number of economic preconditions, the most important of which are as follows:

First of all, comprehensive industrialisation and mechanisation of agricultural production on the basis of modern science and technology must be completed. This means developing a national economic agro-industrial complex; transforming agricultural labour into a variety of industrial labour; developing the branch specialisation of

agricultural production and co-operation between interconnected industrial and agricultural-proper sectors; implementing comprehensive mechanisation and automation in farming and animal husbandry through the introduction of effective systems of machines. All these measures would contribute to the enhancement of labour productivity, appreciable reduction in labour resources employed and to other conditions for the intensification and concentration of agriculture. Consequently, agricultural production would come on a par with industrial production in terms of its level of socialisation.⁶⁰

Secondly, in the course of industrialisation of agriculture on the basis of modern science and technology another prerequisite is created for the removal of socio-economic distinctions between town and country; the development and improvement of collective-farm and state-farm forms of production and the gradual levelling of their material and technical basis. This is invariably linked with the full use of the possibilities and incentives for raising production efficiency as embodied in the collective and state farm forms of economy and the further intensification of the tendencies towards their drawing closer together.⁶¹

60 E. Kapustin, "The Scientific and Technological Revolution and the Improvement of Socialist Production Relations", Social Sciences, vol. 6, no. 1, 1975, p.79.

61 Ibid., pp. 79-80.

Thirdly, the comprehensive industrialisation and high level of socialisation of agricultural production, its concentration, and the growing similarity in the conditions under which collective and state-farms work - all these create an objective foundation for the massive development of production co-operation on the part of agricultural enterprises, both with each other as well as with mutually related industrial enterprises. As a result, agro-industrial associations would develop which would embrace both collective farm and state enterprises and meet the task of bringing the level of concentration of agricultural production and the forms of its organisation closer to those of industrial production and, of drawing together and integrating the two forms of socialist ownership, namely, the collective and state farm forms of production.⁶²

Fourthly, though during the growth of agro-industrial complex, the enterprises linked with each other along the line of product delivery and consumption would still retain their production independence and homogeneity within the associations, at the same time a process of mutual enrichment of economic forms would take place in them. In the course of the development and completion of the industrialisation of agriculture, associations would have the opportunity to increasingly influence the production

62 Ibid., p. 80.

structure of the enterprises. People employed in an agro-industrial complex would be able to work in both agricultural and industrial production, and even in the service field. With the preservation of mutually beneficial economic-accounting relations, there would be increasingly equal working conditions, levels of worker's skill and, in line with this, also wage levels.⁶³

Finally, the interaction of collective-farm, state-farm and industries would lead to a better economic ties among them. The chief trends in the improvement of economic management would be the elaboration of more effective criteria, forms and proportions of distributing national income created in agriculture (including differential rates); the further improvement of the price system with the aim of producing a relative levelling of the conditions of management and stimulating the growth of production efficiency; and adjustment of concrete forms of planning in the sphere of production, product turn-over and material and technical reequipping.⁶⁴

All the above-mentioned developments would contribute to the growth in labour productivity induced by the scientific and technological progress and ensure an increasingly tangible rise in the incomes of the working people from a

63 Ibid.

64 Ibid., p. 81.

public economic complex. This, together with changes in the structure of agricultural labour into a variety of industrial labour would ensure the gradual obliteration of the socio-economic distinctions between industrial and agricultural labour and the essential distinctions between town and country.

It is under this theoretical framework that the impact of the STR on the peasantry in particular, and, on the countryside in general may be assessed.

As a result of the STR, the new equipments and technical know-how is being introduced at accelerated rate in agricultural production in the Soviet Union. Consequently, the nature and content of farm work are changing significantly; the need for unskilled labour is declining and that for skilled labour is increasing. Over the years, there has been a considerable expansion of the sphere of mental work and the requirements for the general and specialised training of all who work in the countryside are rising. The STR has accelerated the industrialisation of agriculture in a qualitatively different form which has produced noticeable changes in the structure of the peasant population. This process is expressed in the progressive tendency toward the "proletarianisation" of this population. Each year the number of farm machine drivers, workers in maintenance and construction trades, set up men, and equipment operators is increasing. Their labour is turning more and more different from that of

the traditional peasant who drive horse-drawn vehicles and do manual jobs (without acquiring specialised skills). In practice, this means a broadening of the group of peasants whose work shows the characteristic features of industrial labour⁶⁵ and who possess the same skills and occupations as those employed in industry. The growth in the number of the repair mechanics and construction workers, set up men, machine tool operators, dispatchers, electricians and so on in both collective-farm and state-farm employees has accelerated a narrowing of the gap between personnel of the collective farm and the state-owned sectors in terms of the substance of the work they do. This is true particularly about the farm equipment operators who have come to approximate industrial workers in level of skill and acquisition of permanent occupations.⁶⁶

Besides, in degree of mechanisation, power capacity per worker and concentration of the means of production, the collective farms are more and more becoming like the means of production of state enterprises. Between 1960 and 1972,

65 Simush, n. 27, pp. 56-57.

66 *Ibid.*, p. 56. Though the new strata in the collective farmers have a great deal in common with workers, they are still to be regarded as members of the collective-farm peasantry and not of the working class. What is decisive in determining their class affiliation is their association with the collective-farm-cooperative forms of property which defines those differences in the conditions of labour and the forms and scale of payment for it that are manifested among both collective farmers and workers. See Zinaida I. Monich, "The Professional and Paraprofessional Component in the Structure of the Rural Population (Based on Data from the Belorussian SSR - Part I)", Soviet Sociology, vol. 12, no. 1, Summer 1975, p. 70.

power capacity per agricultural worker and power capacities per 100 hectares of sown area more than doubled. In former case it rose from 5.4 h.p. to 12.9 h.p. and in the latter case, it rose from 74 h.p. to 157 h.p. As for the productivity of agriculture, the share of collective farms accounting for more than 20,000 roubles of the gross income per 100 hectares of arable land, increased from 36.9 per cent in 1965 to 58.7 per cent in 1972, that of collective farms accounting for more than 30,000 roubles of the gross income registering a particularly substantial increase up to 39.1 per cent in 1972.⁶⁷

According to another more recent estimate, there were 756,000 units of tractors in collective farms as at the end of 1965 but soared to 1,057,000 units by the end of 1980. The gross income of collective farms (in prices of corresponding years) grew from 17.9 thousand million roubles to 19.6 thousand million roubles. At the same time, non-distributable assets of theirs in fixed and circulating assets rose tremendously from 42.3 thousand million roubles at the end of 1965 to 109.8 thousand million roubles by the end of 1980.⁶⁸

Along with the development and concentration of

67 Senyonov, n. 57, p. 110.

68 The USSR in Figures for 1982 (Moscow, 1983), pp. 131-3.

the collective farms, the STR has further deepened and widened the boundaries of individual collective farms which are acquiring the form of inter-collective-farm associations and which at the end of 1972 numbered 5,068 with 67,813 collective farm shareholders, or the form of state and collective farm associations, associations of collective farms with state-owned processing enterprises.⁶⁹ Thus, the number of inter-farm enterprises and organisations set up jointly by collective, state farms and other state and co-operative enterprises rose from 3,354 in the end-1965 to 9,638 by the end of 1980.⁷⁰

All these add up to a single basic problem of the further development of specialisation and concentration of farm production through inter-farm co-operation and industrial integration. The reason is not that collective farm property has already begun to hinder the development of the productive forces. However, certain features of collective farms, i.e. the diversified and fragmented structure of production on each farm and the low level of concentrations are holding back their technical reequipment. Collective farms in fragmented forms are not capable of introducing the achievements of the STR on a large scale

69 Simush, n. 27, p. 62.

70 The USSR in Figures, n. 68, p. 136. Also see Table III.10.

and of assuring total mechanisation of all technological processes. Economically weak collective and state-farms are less able to obtain the necessary variety of high-energy modern machines for the comprehensive mechanisation of production as a whole. Intensification of agricultural production has made it imperative to have a higher level of aggregation as well as optimization of the development of agrarian economy.⁷¹

The construction of material and technical basis of communism, the development of specialisation and concentration of production on the basis of inter-collective-farm co-operation and agro-industrial integration are acquiring greater and greater significance. The special role of this process in increasing the effectiveness and improvement of the qualitative indicators of agriculture was noted by the October Plenum of the Central Committee of the CPSU. In the first place, this process helps in solving the task of evening out the economic and social conditions of working on the land. For, only by deepening the processes of integration and co-operation in production among specialized farms is it possible to eliminate effectively the unevenness in socio-economic development among collective farms. Secondly, since inter-collective

71 Simush, n. 27, p. 62.

farm property is not the property of an individual collective farm, of a single production entity but of a group of farms it reflects a higher level of socialisation of collective farm production and in this way acquires a new quality. Likewise, agro-industrial integration brings a higher ratio of socialist to non-socialist production and makes it possible to introduce into farming more perfect forms of organisation of the productive forces.⁷²

The inter-collective farm co-operation leads to a higher degree of social organisation as is evident from a study undertaken in Moldavia which shows that while there has been an overall decline in collective farmers among rural residents, the share of personnel of inter-collective farm associations among all those employed in the collective-farm sector has risen from 3.6 per cent in 1965 to 16 per cent by 1975.⁷³ The work-forces in inter collective farm associations are employed according to the principles of state sectors, i.e. on the basis of free hiring under the terms of a labour agreement. With the passage of time, this new category of personnel differs less and less from workers in terms of the major parameters of their life activity, their forms of organisation and their levels of earnings.

72 Ibid.

73 Ibid., pp. 63-64.

As a result, this social category becomes a kind of "boundary" group of personnel, in which the line of demarcation between collective farmers and workers is being erased.⁷⁴

The increasing number and scale at which the collective-farms, state-farms and rural industries are interacting among themselves frequently eliminates the lines of demarcation between agricultural and industrial labour. At industrial types of co-operative enterprises, the employees have skills that are basically the same as in industry proper. For example, about two-thirds of the people employed at a modern livestock-raising complex have the skills of electrical implement operators, adjustment mechanics and laboratory personnel.⁷⁵ Agro-industrial associations promote sharper specialisation of farms and rapidly transform farm-work into a variety of industrial work. The range of occupations - both physical and mental - is increasing with the increase of the set of skills each individual may employ in his work. In an agro-industrial complex, a given group of working peoples labours seasonally, alternating between farming and industry. Consequently, migration outside the district is reduced and stability of the workforce is increased. At the same

74 Ibid., p. 64.

75 Ibid., p. 56.

time, the percentage of the rural population not directly involved in agriculture increases.⁷⁶

The development of agro-industrial complexes have revealed the following changes relationships in the rural areas: communities with industrial functions are developing more rapidly; many sub-urban villages are gradually being transformed into towns; a certain portion of the able-bodied population of the surrounding villages are being attracted to work at these new industrial centres. The growth of "pendulum migration" between agriculture and industry testifies to the fact that the village is losing one of its traditional features - low "mobility" of the population. At the beginning of the 1970s there were four million rural people working in the newly-emerged urban centres.⁷⁷

While the interaction of different sectors of economy in the countryside is leading to a merger of co-operative and public means of production, a significant shift in social relationships is also evident. On the one hand, the continuing increase in inter-farm co-operation is speeding the equalization of production conditions and economic potentials of all the farms, while on the other hand, it is giving rise to a number of features and characteristics shared by both state and collective farms.

⁷⁶ Ibid., p. 59.

⁷⁷ Ibid., pp. 59-60.

Two tendencies - differentiation and integration - are constantly increasing in the development of social relationships in the countryside. The former signifies a deepening division of labour and the advance to the forefront of differences connected with the division of labour by branch and occupation and with the specialisation and qualification of personnel. Under this process, we find the emergence of specialised groups of personnel such as those employed by the Farm Equipment Supply Organisation (who number 1.5 million), land improvement workers (1.3 million), personnel in the organisation of the Ministry of Rural Construction and the Inter-Collective Farm Construction Agency (2 million), the personnel of service industry, enterprises (449,000) and others.⁷⁸ The growth of the number of skills and occupations involving both physical and mental labour demonstrates the diminution of general labour.⁷⁹

The second tendency signifies the emergence of signs of interaction and the development of features common to the social aspects of all Soviet people. In particular, the trend toward homogeneity in terms of social class is leading to gradual obliteration of the

78 All the figures are as at the end of 1975. See *ibid.*, p. 66.

79 In advanced collective and state farms personnel were working with up to 160 occupations. See *ibid.*, p. 66.

principal class characteristics of the peasantry. The process of the intensification of the features of integration for the peasantry signifies: (a) the adoption by the peasantry of the best socio-political and ethical features of the working class; (b) the emergence of common qualities characterising the contemporary socialist worker and the peasantry; and (c) a convergence between basic groups of the peasantry and persons performing mental work (a part of the production personnel of the collective farms).⁸⁰

There has been a considerable decline in unevenness in the educational levels of different social groups in the Soviet Union previously unfavourable to the collective farmers. Thus, in 1959 there were four times as many people with seven or more years of schooling per 1,000 persons among professionals, semi-professionals, and white-collar people (sluzhashchie) than among collective farmers. By 1975, the gap had declined to 1.8 times.⁸¹ During the Seven Year Plan period (1959-1965) the number of persons with a secondary education rose from 23 to 31 per cent among collective farmers.⁸² The number of persons with higher and secondary specialised education increased from

80 Ibid.

81 Ibid.

82 Kosygin, n. 27, p. 174.

12 to 36 per thousand employed in collective farms.⁸³ By the end of 1980, the proportion of collective farmers with a secondary (complete or incomplete) or higher education reached to over 60 per cent (from 39 per cent in 1970).⁸⁴

To sum up, during the period of the building of socialism in the Soviet Union, collective farmers could be identified with persons performing physical work. In recent years, though physical work is the predominant kind of work collective farmers do, the collective farm intelligentsia (professionals and semi-professionals in farming) and farm equipment operators who are actively involved in mental work are also becoming ever larger groups.⁸⁵ At the same time there has been a reduction in the percentage of unskilled workers. Thus, during 1959-1975, the number of collective farmers who had no special skills and worked as general labourers decreased from three-fourths to one-half of the total. One in seven turned a farm equipment operator. At integrated livestock operations under the collective farm system of enterprises, one in seven was already a professional (for instance, animal husbandry man, economist, veterinary doctor etc); four fifths of all personal worked at technical occupation (machine operators,

83 Simush, n. 27, pp. 56-57.

84 Brezhnev, n. 45, p. 68.

85 Ibid., pp. 66-67.

electricians, set up men, mechanics, tractor drivers); and one in twenty was a skilled worker in a modern formula feed plant.⁸⁶

Figures also show that at the end of 1977, there were 1,415,000 agronomists, zootechnicians, veterinarians, engineers and other persons with a higher and special secondary education working in agriculture. This was about 583,000 more than in 1970.⁸⁷ Further the number of those in the collective farms who learnt new professions in factories, offices and institutions rose from 245,000 in 1965 to 417,000 in 1979. For those who improved their skills, the number of collective farmers among them increased from 718,000 to 2,758,000 in the above respective years. Then, during 1970-1980, the number of trained operators and mechanics in agriculture has increased almost two-fold and by the eighties exceeded 1,400,000.⁸⁸

Needless to say that all these developments have also led to progressive changes in the peasants' social make-up, way of thinking and participation in civic and political life. For example, a sociological study conducted among the rural population of the Latvian republic in 1975-76 showed that among other things, the press, radio and TV have become "inseparable parts" of the rural people

86 Ibid., p. 57.

87 Lopata, n. 19, p. 119.

88 Volkov, n. 19, pp. 265-6.

including the peasantry. Thus, of those surveyed 94 per cent read newspapers, 92 per cent read magazines, 96 per cent listened to radio and 94 per cent watched TV.

Further, 57 per cent of the people surveyed showed interest in the activities of the community centres. In average terms, the study found 50 per cent of the respondent activity participating in civic and political activities. As for the peasantry in the advanced farms over 70 per cent of those surveyed participated in civic activity compared to only 40 per cent in the economically weaker farms. In other words, if material and cultural benefits at a higher standard were to be provided to the entire peasantry, the results would be almost uniform for all in respect of civic and political activities as well.⁸⁹

The STR and Working Class

The STR in the Soviet Union has brought radical changes in the content and nature of labour of the workers, in their position in the production process and in the level of their general education and technical training. The changes in labour power are mainly in the following directions: (a) complete elimination from production of all

⁸⁹ For the details of the survey see I.A. Anderson, "The Rise in the Level of Living and the Development of the Intellectual Needs of the Rural Population", Soviet Sociology (New York), vol. 28, no. 1, Summer 1979, pp. 3-15.

kinds of arduous, unskilled and little-skilled labour; (b) transition of all workers to a higher stage of general and technical education when a complete secondary or specialised secondary education becomes the lowest boundary; (c) extension of the general fundamentals of all trades (in conditions of integration of the basic trends of technological progress) and their ever-greater unification by means of universal polytechnical education; (d) abolition of the old vocational division of labour and transition to a new division of labour based on broad theoretical training and the acquisition of many-sided production skills; and all-round development of production workers on the basis of organically combining manual and mental labour.⁹⁰

Overall automation and mechanisation which are the characteristics of the present-day STR extend the vocational range of a worker, abolish narrow specialisation and enhance the creative nature of labour. Changes have thus taken place in the functions of the main groups of workers previously engaged in the direct operation and servicing of equipment. The size of this category of workers is greatly reduced due to automation. On the other hand, there is a steep rise in the share of jobs in maintaining and

90 Y. Borisov, "Politico-Economic Problems of the Contemporary Scientific and Technological Revolution", in USSR Academy of Sciences, ed., The Scientific and Technological Revolution and the Modern Society (Calcutta, 1970), p. 46.

setting up automatic transfer lines and machines, drawing up and changing programmes for the operation of equipment and in general regulation and control of intricate automatic systems. All these jobs so far do not yield to automation.⁹¹

Automated production thus changes the proportions between different groups of workers at enterprises and their functions. A new technical division of labour occurs where the major agents of the new aggregate labour of an enterprise become the adjuster, repairman, electrician, programmer and engineer or technician.⁹²

The development of the working class in the Soviet society in the conditions of the STR has been two-fold: extensive and intensive. The first process signifies the induction of a new generation of the workers into state-farm sector and state industry with higher general education and modern occupational training of a skilled kind suited to the requirements of automated and mechanised sectors. The second process signifies the acquisition of higher educational qualifications and modern vocational skilled training by the already existing members of the working class in order to work in the new industrial establishments

91 Ibid.

92 Ibid., p. 47.

or the reequipped industries based on comprehensive mechanisation and automation. The 1960s were in general characterised by a tendency toward both absolute and relative increase in the number of workers being trained (studying) for upgrading.⁹³ This trend has had a definite relationship to the constantly increasing introduction of the achievements of the STR into production, and accordingly to more rapid obsolescence of knowledge, occupational skills and the like. The rise in the general skill level of workers and an increase in the working class of the number and percentage of workers of a new type whose occupations are largely defined by their level of general and technical knowledge as distinct from skills of the old type whose basis was skill in manual labour and job experience, as well as a rapid growth in the number of workers in occupations corresponding to the policy of intensifying production marked a new stage in the development of the working class as against the decades before the 'sixties.⁹⁴

Thus, between 1965 and 1975 the share of persons engaged in manual labour in Soviet industry declined from 40.4 per cent to 32.8 per cent. The same trend appears to

93 See Tables III.12, and III.13.

94 L.A. Gordon and E.V. Klopov, "The Social Development of the Working Class of the USSR", Soviet Law and Government, vol. 11, no. 3, Winter 1972-73, pp. 242-3.

have maintained itself in the later years. For instance, during 1976-80, more than 60,000 manual workers in the RSFSR were released each year from industrial machines.⁹⁵

The share of skilled workers too increased in the recent years. Available figures indicate that between 1965 and 1975 the share of adjusters of automated lines and systems of machine tools, fitters, and electricians among industrial workers rose from 16 per cent to 19 per cent.⁹⁶

In the rural sector, the reequipment of state farms and rural state enterprises with modern achievements of the STR, creation of new mechanised and automated industries in the rural areas have been responsible for the growth in agrarian component of the working class with more and more specialised skills and with higher general and technical education. This has considerably contributed to the growing similarity of the working class population in town and country. This process has been further reinforced by the increasing material and cultural facilities in the countryside through increased salary, larger share from social consumption funds, larger distribution of material

95 E. Manevich, "Rational Utilization of Manpower", Problems of Economics, vol. 25, no. 4, August 1982, p. 25.

96 Ibid., p. 26.

and cultural goods, i.e., television and radio facilities, medical and educational benefits and so on.⁹⁷

In the urban sector too, the existing industries and services are being reequipped with modern technology and on scientific basis; and new ones are being created. As a result, here also, the working class has equipped itself with new skills and educational qualifications.⁹⁸

For instance, during the Seven-Year Plan period the number of persons with a secondary education rose from 45 to 58 per cent among industrial workers.⁹⁹ In 1959 there were 386 workers with a higher or secondary education per 1,000; by the end of 1970 this figure reached 550.¹⁰⁰ The number of personnel with higher and secondary specialised education in state farm more than doubled from 1965 to 1975; from 27 to 58 per thousand.¹⁰¹ By the beginning of 1981, about 75 per cent of the workers have had secondary (complete or incomplete) or higher education. During the Tenth Five-Year Plan period itself two thirds of all those

97 For a detailed survey and its results, see I.V. Prudnik, "Agro-industrial workers", Soviet Sociology vol. 25, no. 4, Spring 1977, pp. 3-37.

98 See Tables III.12 and III.13.

99 Kosygin, n. 27, p. 174.

100 Report of the CPSU Central Committee, n. 33, p. 86.

101 Simush, n. 27, pp. 56-57.

workers who entered production, i.e. 12.5 million persons, had trainings at vocational schools. Thus, "the very character of the labour of the modern worker is changing -- it is increasingly acquiring an intellectual content".¹⁰²

A direct and immediate result of the increasing number and ratio of the well-educated, highly skilled and trained workers has been to raise considerably its creative potential. This is but natural. For, the objective trend of the STR lies in the gradual liberation of man from the direct servicing production processes, from routine and uncreative operations. The worker growingly concentrates on the performance of purely "human functions : on making non-trivial decisions, on the search for optimal technological variants, and on the development of new ideas".¹⁰³

But his participation in technical creativity, particularly in the sphere of invention, and rationalisation of production presupposes a higher level of general educational, and trade and technical training he must have. Since these qualities in addition to the better information on a multitude of questions (thanks to the intensification

102 Brezhnev, n. 45, p. 68.

103 T.I. Zaslavskaja, "Economic Behavior and Economic Development", The Soviet Review (New York), vol. 22, no. 2, Summer 1981, p. 27.

of all forms of communication) shape an individual who is self-confident and who has a deep need for "self-expression" and "self-affirmation", the worker being discussed himself changes in the process.¹⁰⁴

Naturally then, the modern higher level of general and occupational culture of the working class of the USSR has also contributed to their socio-political role in the society. The Twenty-Fourth Congress of the CPSU noted that workers who attained a high level of general-educational and trade and technical training were usually politically more active. In recent years this stratum of worker has been steadily growing in the Communist Party.¹⁰⁵ In fact, it is primarily among them that the party gains new members. It is increasingly out of their ranks that the cadres or activists of social and political organisations are shaped and that the candidates for the post of deputies to Soviets are nominated.¹⁰⁶ This will be analysed in detail in the next two chapters.

The STR and Intelligentsia

Intelligentsia represents the highest group in Soviet social structure in terms of its mental skills,

104 Ibid., p. 28; also Gordon and Klopov, n. 94, p. 245.

105 Report of the CPSU Central Committee, n. 33, p. 86.

106 Gordon and Klopov, n. 94, p. 245.

culture, life-style, socio-political awareness and directions to socio-political and economic life of the Soviet society. It is undergoing a significant transformation under the impact of STR, both in terms of growth of number and the development of its professional skills, culture and life-style.

The major trend in the development of intelligentsia is its changing composition in the sphere of science and technology. The development of the productive forces under the conditions of developed socialism and under the influence of the STR creates real opportunities for further growth of the intelligentsia. In 1939, Soviet society had a social class structure corresponding to the initial stages of the building of socialism: workers numbered 33.5 per cent, intelligentsia were 16.7 per cent (all persons doing non-manual work) and the collective farm peasantry together with craftsmen belonging to co-operatives comprised 47.2 per cent. In 1959, 49.5 per cent of the population consisted of workers, 31.4 per cent were collective farmers and 18.8 per cent intelligentsia. In 1975 the last group had become 22.2 per cent,¹⁰⁷ and in 1980, 25 per cent.¹⁰⁸

107 I. S. Puchkov and G. A. Popov, "Sociodemographic Characteristics of Science Personnel (Part I)", Soviet Sociology, vol. 16, no. 3, Winter 1977, p. 68.

108 Brezhnev, n. 45, p. 69.

A numerical rise in the personnel engaged in mental labour has occurred in every branch of the economy, but it has been largest in science, industry, construction and agriculture, and also in transport and communication enterprises. Between 1940 and 1950 the number of scientific workers in the USSR increased from 98,300 to 162,500 persons, that is to say, less than two-fold. During the next decade their number rose to more than double, to 354,200. The next 100 per cent increase was achieved within six years and by 1966 the number of scientific workers reached 712,400; while by 1970 the figure was 927,700 and by 1975 it had reached 1,223,400.¹⁰⁹ In the next five years, by 1980, it further rose to 1,373,300.¹¹⁰ This process cannot be a permanent one, since doubling would occur even more frequently and "the entire population would very soon be absorbed in the sphere of scientific activities".¹¹¹

109 V. Marakov and Y. Meleshchenko, "Specific Features and Social Consequences of the Scientific and Technological Revolution", in Robert Daglish, ed., The Scientific and Technological Revolution: Social Effects and Prospects (Moscow, 1972), p. 147; T. Khataurov, The Economy of the Soviet Union Today (Moscow, 1977), Chapter VII, "Scientific and Technological Progress and the Development of Socialist Production", p. 151.

110 *The USSR in Figures*, n. 68, p. 81.

111 Marakhov and Meleshchenko, n. 109, p. 147.

There are many scientific professions in the Soviet Union which are being replaced by entirely new ones. Recently, under the STR, there has been a sharp growth in the number of specialists in cybernetics, the atomic industry, space vehicles, construction and design, rocketry, quantum generators etc. The automation of production has itself created about more than 20 new specialities. Hence, there has been a need for an unprecedented number of trained scientific personnel.¹¹² Scientific personnel are the determining link in the successful development of science. No country has ever known such rates of training of scientific personnel and growth in the numbers of scientific workers and of scientific institutions as the Soviet Union. Scientific work has become a mass profession. During the past two decades the rates of growth of the number of the persons engaged in science and scientific services have surpassed the increase in the number of those engaged in any branch of social production.¹¹³

In addition to scientific personnel, many other social groups under the stratum of intelligentsia, have developed under the STR. According to Z.I. Monich, the

112 Ibid.

113 S. Mikulinski, "The Problem of Scientific Personnel Under the Conditions of the Revolution in Science and Technology", Soviet Law and Government, vol. 12, no. 2, Fall 1973, p. 5.

leaders of farming brigades and the heads of livestock units in the rural sector also come into the category of intelligentsia. His argument is that "under conditions in which agriculture is becoming saturated with increasingly powerful and diverse equipment, when the achievements of science are being widely introduced into agricultural production, and application of the principles of accounting and scientific organization of labour is being extended by every possible means",¹¹⁴ the functions of personnel of the middle level, i.e., leaders of farming brigades and livestock units, are becoming more complicated requiring increased intellectualisation of their work and acquiring the characteristics of skilled mental labour. A study undertaken in the rural population of the Belorussian SSR showed that whereas in 1964, only 6.9 per cent of the leaders of field crop brigades and heads of livestock units in collective and stage-farms had professional or para-professional training in these fields, by 1969 this rose to 26.6 per cent (including practical workers) who had studied by correspondence in higher and para-professional educational institutions. The same study showed that in some Raions, over 50 per cent of such practical personnel were engaged in correspondence schooling.¹¹⁵

114 Monich, n. 66, p. 72.

115 Ibid., pp. 72-73.

Intelligentsia, which has been termed professional and para-professionals by Monich, in the sphere of production of tangibles are present in the countryside in the form of personnel of collective-and-state-farms, the Farm Machinery Agency, veterinary offices, experimental research stations, forestry stations, construction agencies, industrial enterprises and so forth. The bulk of this stratum in countryside is associated with agriculture and is marked by a more highly developed occupational structure and includes engineers, technologists, agronomists, animal husbandrymen, veterinary doctors and para-professionals, economists and accountants.¹¹⁶

With the development of agriculture, with its increasingly being interwoven with science and technology the need for highly qualified, specialised personnel in the countryside increases. The data from the Belorussian SSR showed that whereas in 1965 there were 21,400 agricultural experts with higher and secondary education, by the end of 1969 there were approximately 34,000 or more than 50 per cent higher of 1965.¹¹⁷ Another survey in Latvia showed

116 Zinaida I. Monich, "The Professional and Para-Professional Component in the Structure of the Rural Population" (Based on Data from the Belorussian SSR, Part III), Soviet Sociology, vol. 12, no. 3, Winter 1973-74, p. 38.

117 Ibid.

that compared to 1960, the percentage of professionals and para-professionals with higher and secondary specialised education employed in the republic's agriculture doubled in 1970. In absolute figures, this increase of persons in 1960-70 exceeded the increase in the same category in the earlier 20 years, between 1940 and 1960.¹¹⁸ Such growth will continue in future as well by the needs of developing agriculture on the basis of the introduction of the achievements of the STR.

The STR is bringing new occupations into being: agricultural chemist, technician for labour-intensive processes in livestock farming, electrical technician, planning economist and so forth. For example, an entirely new occupational grouping - that of economists - has developed in the collective-and-state-farms of the Belorussian Republic. There the total number of planner economists grew from 2,500 to 3,200 between 1965 and 1969.¹¹⁹ "Born of the need for scientific management of agriculture, this profession is significantly promoting comprehensive introduction of methods of scientific organisation of work and management and extensive

118 For details see, M.E. Ashmane, "An Analysis of Quantitative and Qualitative Changes in the Composition of the Soviet Professional and Paraprofessional Group in Latvia", Soviet Sociology, vol. 17, no. 1, Summer 1978, pp. 69-82.

119 Monich, n. 116, p. 40.

introduction of the principles of cost accounting."¹²⁰
 This professional group will continue to grow immensely as such posts have not yet been filled on all the farms.

Further, merger of farms, expansion of the scales of agricultural production, creation of agro-industrial enterprises etc. facilitate the need of experts in the countryside. In Belorussian Republic, from 1965 to 1969 the growth of the number of engineering and technical personnel was more than 80 per cent.¹²¹ Then, to cite another instance, in 1960, the number of "agricultural professionals and paraprofessionals" in the collective farms of Kazakhstan was 1.4 per cent but increased to 2.7 per cent in 1970. In state farms the percentages were 2.6 and 4.2 respectively. The absolute number of them in the republic's rural population grew from 7,995 persons in 1960 to 11,106 in 1970. This distinct group of rural professionals and paraprofessionals includes the administrative and executive staff, engineering and technical personnel, and persons engaged in mental labour and having specialised secondary education.²²²

120 Ibid.

121 Ibid., p. 41.

122 M. Kadyrtaeva, "A Contribution to the Study of the Present Social Structure of the Peasantry", Soviet Sociology, vol. 17, no. 3, Winter 1977-78, pp. 12-13.

In addition to the growth in the number of intelligentsia directly engaged in material production, there has also been a considerable increase in the number of that section of intelligentsia which is engaged in non-material sectors of the Soviet economy, irrespective of whether they are immediately productive or non-productive. The growth of productive forces under the STR has created more and more opportunities for the further investment in the non-material sectors, i. e., trade, public catering, education and culture, public health, and physical culture and social maintenance. These sectors have a tremendous significance in Soviet society for the improvement of non-productive aspects of the Soviet social structure.¹²³

The Emergence of Greater Social Homogeneity

It is now evident that there are certain overlappings in the composition among the peasantry, working class and intelligentsia. This has put many Soviet sociologists in dilemma and a great deal of discussion among them has been going on about putting a certain group in a class or stratum.¹²⁴ This is but natural.

123 Table III.14 shows the structure of the employed population in non-material sectors.

124 Monich, n. 116, pp. 59-73, especially pp. 59-61 and Gordon and Klopov, n. 54, p. 248. For a lively discussion on the issue, see, for instance, Te. A. Stepanion, "What is indisputable and what is at issue in the discussion of the Social Structure of Soviet

Under the conditions of developed socialism there is an intensive development of the processes whereby Soviet society is becoming socially homogeneous. This tendency is further being intensified under the influence of the revolution in science and technology, i.e. the SR. One of the most important manifestations of the gradual emergence of social homogeneity in Soviet society is the ever closer convergence and often direct merger with the working class of those groups in the toiling population that had previously differed significantly from it "by their place in a specific historical system of societal production, by their relationship...to the means of production, by their role in the social organisation of work and consequently, by the methods through which they acquired social wealth and by the size of the share of the social wealth they had at their disposal".¹²⁵

The emergence of social homogeneity and the convergence of classes and social strata in Soviet society is an extremely complex process occurring on many planes under

Society?" Soviet Sociology, vol. 20, no. 2, Fall 1981, pp. 35-52; N.A. Aitov, "Debatable Questions in the Study of the Soviet Intelligentsia", Soviet Sociology, ibid., pp. 23-34; "Comments of the Editors of Sotsiologicheskie issledovaniia, Soviet Sociology, ibid., pp. 53-67.

125 Gordon and Klopov, n. 94, p. 247.

the influence of social, political and economic factors; it is expressed in various phenomena of culture and reflects social and cultural changes in Soviet society.

The acutest disputes among the Soviet sociologists are those with respect to the question of the convergence and merger with the working class of office personnel and the intelligentsia who, in their majority, like the workers are employed in the state sector of the economy. Essentially, the discussion centres around one, but central, point of the problem as to whether there exist grounds to speak of a high level of convergence of these groups or their sub-divisions with the working class and even of their becoming part of the working class. Discussion of this problem is not merely of theoretical interest and acquires greater significance by the fact that it pertains to the paths and character of development of large groups of the working people which are constantly increasing in number. The intelligentsia and office personnel in the Soviet Union number tens of million.

In 1970, over 16 million specialists or intelligentsia (including professionals and semi-professionals) and about 12 million office personnel without professional education were employed in the Soviet economy. Each of these groups was comparable in numbers to the collective-farm peasantry who were some 17 million in 1970.¹²⁶ Indeed,

¹²⁶ Ibid., p. 248.

by 1978 while the number of the persons engaged at the collective farms declined to about 13 million, that of specialists soared to 26,4 million.¹²⁷ Figures also show that specialists with "higher and special middle class" constituted 15.7 per cent of total labour force in 1965 but 18.7 per cent in 1970 and 23.7 per cent in 1977. Then, specialists with higher education accounted for 23.3 per cent of white-collar employees in 1965 but their share increased to 26.4 per cent in 1970 and 33.1 per cent in 1977.¹²⁸

The basis of the convergence of persons doing non-physical work in services (office personnel in the narrow meaning of the word) with the working class is the fact that both perform the same kind of work - primarily implementary, repetitive - and occupy fundamentally identical position in the system of social production (that is to say, the work of most office personnel and nearly all workers is not in any way involved with giving direction to the people). Important indicators of the closeness to each other of the workers and office personnel as social categories and factors making for their convergence are the gradual elimination of the formerly very substantial differences in the levels of education and the standard of living. This closeness is further manifested

¹²⁷ Lopata, n. 19, p. 119; The USSR in Figures, n. 68, p. 131.

¹²⁸ Seweryn Bialer, Stalin's Successors: Leadership, Stability and Change in the Soviet Union (Cambridge, 1982), p. 168; also see Table III.15.

in the repeated changing of jobs (or the ready availability of such change) in the course of a life-time during which office personnel become workers and vice-versa. The growing "unity in daily life" of these groups and the wide occurrence of families containing both workers and office personnel further reinforce their social similarity.¹²⁹

Significant differences, however, continue between the two. A majority of the office personnel are employed outside the sphere of material production and differ from industrial workers both by the content of their work, the size of the work groups in which they are employed, and the degree to which the work process is collective (specifically, the concentration of office personnel in production collectives is significantly lower than the concentration of workers). But in these spheres also, in the epoch of the STR, these differences have a tendency to even out. Enterprises of enormous size are appearing in the service spheres in the form of computer centres, drafting offices, departmental stores etc., which employ hundred and thousands of people whose work takes on an essentially industrial character. All these developments reflect a tendency toward expansion of the boundaries of the working class of the USSR in the course of its convergence with non-professional office personnel. A new structural unit of "workers in white

¹²⁹ Gordon and Klopov, n. 94, pp. 248-9.

smocks", "workers in sleeve-garters" is gradually coming into being in the working class. The further expansion and "industrialisation" of the service sphere on the basis of the new science and technology is leading not only to the growth in the numbers of this group but also to its increasing integration, or at least, that of certain of its sub-divisions, into the working class.¹³⁰

Major changes are also occurring in the status of intelligentsia and its relationship with the working class. Significant differences bearing a class character between the working class and the intelligentsia disappeared comparatively long ago. In the pre-revolutionary Russia, most of the intelligentsia had been either part of the exploiting classes or closely associated with the latter. Under the building of and consolidation of socialism, these differences disappeared. The bulk of the intelligentsia today do not differ from their objective relationship to the means of production and their ethical and political attitudes. The STR has introduced new factors into this process of bringing intelligentsia and working class closer.

In the first place, the growth in the number of the intelligentsia has been sharp and at a more headlong process than any other social group in the gainfully employed

¹³⁰ Ibid., pp. 249-50.

population of the USSR.¹³¹ Also the membership in this group has lost the elite-meaning it may have had in the past. The professions of engineer, teacher, physician, economist and agronomist have come to exist on the same mass scales as workers' trades. This mass character of the principal professions provides an objective premise for overcoming the peculiar "inaccessible complex" that in the past defined to a great degree the bases in the social psychology of the attitudes of the masses of workers to professionals. The mass character of the professions of intelligentsia as well as the elimination of the social, cultural, and material barriers that formerly hindered the working people from access to this stratum, has opened broad potential for filling the intelligentsia with the people of working class as well as of present origin.

Secondly, unlike in the past, a large number of intelligentsia today is engaged in the sphere of material production: at industrial enterprises, in construction organisations, in transport enterprises, in state and collective-farms, in materials and equipment supply and

¹³¹ See Table III.16. The rate of growth of the scientific and technical intelligentsia alone exceeded the rate of growth of all the other social groups by 1970. See Report of the CPSU Central Committee, n. 33, p. 88.

so on and so forth. Thus, by the end of 1960s over 40 per cent of the intelligentsia, which rose to 7 million persons in 1970, were engaged in such professions. In addition, over 8 per cent were employed in scientific institutions, the bulk of which have been increasingly associated with material production. The sixties also saw a rapid increase in the share of professionals (intelligentsia in the socio-economic sense of the term) in the total number of employees in material production branches.¹³²

As a result of above developments, the majority of professional intelligentsia engaged in material production are employed as members of large work forces and are subject to their discipline, organisation and interests. Furthermore, in the course of the STR, there has been an increase in the group of professionals whose work differs little from that of workers in terms of the degree to which it is subdivided.¹³³

Thus, today, in addition to the same relationship to property, the participation in material production, collectivity, size of work staff and the organised nature of work creates close convergence between substantial strata of intelligentsia and the working class. This process is further reinforced by a rapid increase in the general and

132 See Table III.17.

133 Gordon and Klopov, n. 94, p. 253.

technical culture of the working class associated with the STR.

The convergence, however, is not complete and significant functional differences persist between the engineering and technological intelligentsia and the production workers as such.¹³⁴ These differences will disappear only with further fundamental changes in the character and content of labour in the course of the reorganisation of material and intellectual production under the influence of the STR and with the further development of social relationships. For, the intelligentsia continues to differ from the working class in the level of culture and many features of daily existence and life-style. The tendency of gradual obliteration of such differences can, however, be broadly discerned at this stage.

Another important factor in the convergence of the two groups is the fact that while becoming closely involved with the working class, groups of engineering-technical personnel and scientists--professionals will continue for a long time to exist as a sort of social "condominium", as

¹³⁴ For a recent case study in this respect conducted in the city of Gorky and Gorky region, see V. Andreyenkov and Others, "The Soviet Working Class and the Engineering and Technical Intelligentsia", Social Sciences (Moscow), vol. 21, no. 2, 1982, pp. 42-55.

transitional boundary layers belonging both to the working class and the intelligentsia and constituting a connecting link between the two. "The grafting of large groups of the intelligentsia to the working class is one of the preconditions for strengthening this class and raising its role of leadership in the life of Soviet society. This important social shift permits, in particular, an understanding of the social significance of the high percentage of professionals in the Communist Party of the Soviet Union."¹³⁵

The process of convergence of collective farmers with other advanced sections of society has also a similar pattern. The drawing together of the two forms of socialist property, development of mixed economic organisations involving collective farms, state farms, and state enterprises together with the rising educational levels have vastly influenced the social structure in the countryside. As noted earlier, the new strata of professionals and paraprofessionals have been emerging among those associated with collective farms and in the countryside. Secondly, the machine operators and other workers "servicing advanced technology" in the countryside are growing in number and have the same functions and knowledge as the similarly-placed workers in factories. Far more significant, the

¹³⁵ Gordon and Klopov, n. 94, p. 254.

changes in the forms of organisation and payment for the labour of collective farmers as also the same social insurance to them as available to the factory and office workers have only accelerated the process of obliteration of distinctions between the worker and the peasant.¹³⁶

Indeed, given the higher level at which this obliteration occurs, the same observation may be made; to a more or less extent, in relation to the distinctions between the collective-farmers and the intelligentsia as well.

In conclusion, the present social structure of Soviet society has thus become mature and developed under conditions of the SIR. This maturity is determined by the degree of elimination of existing socio-class distinctions, by society's readiness for the processes of obliterating distinctions between classes, stratum, social sections and groups. The relevant processes of obliteration of social distinctions between the working class and the collective-farm peasantry, between them and intelligentsia, between manual and mental labour, between town and country, as well as of their drawing together take place on the basis of the high achievements in the development of the productive forces, achievements in improving distribution and labour conditions, advances in the skills, material and

136 Brezhnev, n. 45, p. 68.

cultural levels of working people, in their political activity and participation in administering social affairs. Consequently, it all becomes a matter of drawing together not at the lowest or average levels, but at the highest levels of scientific and technological progress, and a maturing of the social forms of the people's life and culture attained by the whole of society.

The working class which numbered almost 80 million and made up 75 per cent of the employed population in 1980¹³⁷ (the respective figures for 1975 were 66 million and 56 per cent) is the most organised, advanced and leading social group and is becoming qualitatively different: the proportion of highly educated and skilled workers is increasing,¹³⁸ As the chief productive force and as the carrier of technological progress it holds the leading position in the system of socialist social relations.¹³⁹

137 Brezhnev, n. 45, p. 67.

138 In recent years, workers at many industrial units are mastering two or three occupations. Such specialists are increasingly in demand in view of the brigade organisation of labour. Besides facilitating the "separation of workers" this also serves as an element in the process of social homogeneity. For a detailed analysis see Manevich, n. 25, pp. 22-23.

139 V. Semenov, "New Phenomena in the Structure of Soviet Society", Reprints from the Soviet Press (New York), vol. 16, no. 7, 6 April 1973, p. 13.

Although the collective-farm peasantry as a whole decreased in terms of size¹⁴⁰ and proportion in the social structure, its most advanced sector, connected with technology, i.e. machine operators, is steadily growing. This brings the alliance of the working class and the peasantry to a new and more equal level.

The strata of intelligentsia and office employees have also undergone qualitative and quantitative changes. The increasing growth rates of the scientific and technical intelligentsia in the recent years under the influence of the STR have created ever broader prospects for the development of labour which combines mental and manual functions. Thus, the gap between the workers and collective farmers on the one hand, and the intelligentsia and office employees on the other have considerably been bridged.

¹⁴⁰ Average annual number of persons engaged at the collective farms (less fishing co-operatives) declined from 18.6 million in 1965 to 13.3 million in 1980. See The USSR in Figures, n. 68, p. 131. Also see Table III.11.

TABLE III.1

INVENTIONS AND INNOVATIONS IN THE NATIONAL ECONOMY

	1971-75		1976-80		1980	1981
	Total	Annual average	Total	Annual average		
Number of innovations and applications for invention rights suggested, thousands	24,346	4,869	25,452	5,090	5,063	4,934
Number of inventions and innovations introduced, thousands:						
Inventions	58	12	94	19	24	24
Innovations	18,525	3,705	20,004	4,001	4,024	3,950
Outlay on invention and innovations, million rubles	1,404	281	1,752	350	379	392
Economic effectiveness (savings) from inventions and innovations introduced, million rubles	19.6	3.9	29.2	5.8	6.9	6.9

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 83.

TABLE III.2

DEVELOPMENT OF AUTOMATIC CONTROL SYSTEMS

	1971-75		1976-80		1980	1981
	Total	Annual average	Total	Annual average		
Number of Automatic Control Systems (ACS)	2,309	462	2,374	475	697	483
Management Information System (MIS)	838	168	389	78	92	59
Automatic process Control System (APCS)	564	113	1,306	261	395	320
ACS of regional organisation	631	126	454	91	138	46
ACS of ministries and departments	168	33	92	18	31	6
AIPS (automatic information processing systems)	108	22	133	27	41	32

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 84.

TABLE III.3

MECHANIZED FLOW AND AUTOMATIC LINES, COMPREHENSIBLY MECHANIZED
AND AUTOMATED SECTIONS, WORKSHOPS AND ENTERPRISES IN INDUSTRY

(As of July 1; thousands)

	1965	1971	1975	1979	1981
Stock at industrial enterprises:					
Mechanized flow lines	42.9	89.5	114.1	136.2	145.3
Automatic lines	6.0	10.9	17.1	24.3	27.4
Comprehensively mechanized and automated sections, workshops, enterprises	22.4	44.2	66.2	83.5	91.0
Number of comprehensively mechanized and automated enterprises	1.9	5.0	5.4	6.2	6.5

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 85.

TABLE III.4

DEVELOPMENT AND COMMISSION OF NEW TYPES OF MACHINERY
(Thousands)

	1971-75		1976-80		1980	1981
	Total	Annual average	Total	Annual average		
Development of new types of machinery, equipment, apparatus, instruments and automation means	20.0	4.0	18.5	3.7	3.6	3.2
Introduction and batch production of new types of industrial output	16.6	3.3	17.5	3.5	3.7	3.6
Of which machinery, equipment, apparatus, instruments and automation means	13.3	2.7	13.7	2.7	2.9	2.9
Industrial equipment modernized at the industrial enterprises	732	146	812	162	165	157

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 82.

TABLE III.5

GROWTH RATES OF LABOUR PRODUCTIVITY PER INDUSTRIAL
WORKER (1950 = 100%)

Year			
1965	1970	1979	1979 in % of 1970
256	338	515	152

Source: Cited in L.A. Kostin, "Labor Productivity
in the Present Stage", Problems of Economics,
no. 4, August 1981, p. 5.

TABLE III.6

GROWTH OF INDUSTRIAL OUTPUT (1960-1965)

	1960	1965	1965 % of 1960
Gross Industrial Output (Thousand million rubles)	155	234	151

Source: L.I. Brezhnev, Report of Central Committee of
the Communist Party of the Soviet Union to the
23rd Congress of the CPSU in 23rd Congress of
the Communist Party of the Soviet Union
(Moscow, 1966), p. 64.

TABLE III.7

BASIC INDICES OF ECONOMIC-SOCIAL DEVELOPMENT OF THE USSR
(1940 = 1)

	1940	1960	1965	1970	1975	1980
Gross social product	1	4.2	5.7	8.1	11.0	13.6
National income produced	1	4.4	6.0	8.7	11.4	14.1
Total industrial output	1	5.2	7.9	12	17	21
Gross agricultural output	1	1.6	1.8	2.2	2.3	2.5
Social labour productivity	1	4.0	5.3	7.4	9.2	10.8
Labour Productivity:						
In Industry	1	3.0	3.7	4.9	6.6	7.7
In Agriculture (socialized production)	1	2.0	2.4	3.3	3.5	4.0
In construction	1	2.9	3.7	4.5	5.8	6.4
Real incomes per capita	1	2.5	3.0	4.0	4.9	5.8
Allowances and benefits received by the population from the social consumption funds:						
Total	1	5.9	9.1	13.9	19.6	25.4
Per capita	1	5.3	7.6	11.0	14.8	18.4
State and co-operative retail trade turnover	1	3.2	4.2	6.3	8.5	10.6

Source: The USSR in Figures for 1982 (Moscow, 1983), pp.35-36.

TABLE III.8

DYNAMICS OF AVERAGE ANNUAL GROWTH RATES OF LABOUR
PRODUCTIVITY IN THE USSR (in %)

	1961-65	1966-70	1971-75	1976-80
Productivity of Social				
Labour	5.6	6.8	4.6	3.2
Industry	4.6	5.7	6.0	3.2
Agriculture (average annual social production compared with the preceding five-year period)	4.8	5.4	4.1	2.8
Construction	5.2	4.1	5.2	2.1
Rail transport	5.6	4.9	4.4	0.1

Source: Cited in A. Notkin, "Intensification and the Effectiveness of Expanded Reproduction", Problems of Economics, vol. 25, no. 5, September 1982, p. 8.

TABLE III.9

INDICES OF INDUSTRIAL AND AGRICULTURAL PRODUCTION
(1970-1980)

	1970	1980	1980 in % of 1970
Industrial production (in thousand million rubles in comparable prices)	352	627	178
Agricultural production (average annual output)	100.4	123.7	123

Source: L.I. Brezhnev, Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union, in 26th Congress of Communist Party of the Soviet Union: Documents and Resolutions (Moscow, 1981), p. 42.

TABLE III.10

INTER-FARM ENTERPRISES AND ORGANISATIONS
(end-of-year figures)

	1965	1970	1975	1980
Number of inter-farm enterprises and organisations	3,354	4,580	6,330	9,638
Number of their partners (collective, state farms and other state and co-operative enterprises and organisations), thousands	48.5	68.7	94.1	153.7

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 136.

TABLE III.11

SOCIAL CLASS COMPOSITION OF THE POPULATION

	1939	1959	1970	1979	1981
Total population (including non- working dependents)	100	100	100	100	100
of whom					
Workers	33.7	50.2	57.4	60.0	60.5
Collective farmers and co-operated handicraftsmen	47.2	31.4	20.5	14.9	13.8
Employees	16.5	18.1	22.1	25.1	25.7
Individual farmers and non co-operated handicraftsmen	2.6	0.3	-	-	-

Note: Beginning with 1959 co-operated handicraftsmen i.e. the members of small producers artels of co-operation have been transferred to the system of state enterprises and accounted as workers and employees.

Source: The USSR in Figures for 1982 (Moscow, 1983), p. 15.

TABLE III.12

TRAINING AND UPGRADING OF WORKERS

	1940	1950	1960	1965	1970
Graduation of workers from trade and technical schools (thousands)	-	493	741	1,100	1,638
- ratio thereof to average annual number of workers (%)	-	1.8	1.7	2.0	2.6
Number of workers taught new occupations and skills at enterprises and institutions (thousands)	1,606	2,326	2,807	3,407	4,500
- ratio thereof to average number of workers (%)	7.0	8.4	6.3	6.3	7.3
Number of workers given upgrading training at enterprises and institutions (thousands)	1,472	3,490	5,358	7,225	9,000
- ratio thereof to average annual number of workers (%)	6.4	12.6	12.1	13.4	14.5

Note: These data do not include information on the training of skilled personnel in collective farms or in paid courses in the general schools.

Source: Cited in L.A. Gordon and E.V. Klopov, "The Social Development of the Working Class of the USSR", Soviet Law and Government, vol. 11, no. 3, Winter 1972-73, p. 244.

TABLE III.13

UPGRADING OF PROFESSIONAL QUALIFICATION OF
 WORKERS IN THE SOVIET NATIONAL ECONOMY
 1965-1977 (in millions)

	1965	1970	1977
Workers who received new higher professional specialization	3.4	4.8	5.7
Workers who participated in training for higher qualifications	7.2	9.0	19.9

Sources: Narodnoe Khoziaistvo SSSR v 1977 g (Moscow Statistika, 1978), p. 399; cited in Seweryn Bailer, Stalin's Successors: Leadership, Stability and Change in the Soviet Union (Cambridge, 1982), p. 157.

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TABLE III.14

STRUCTURE OF THE EMPLOYED POPULATION IN NON-MATERIAL
SECTORS
(expressed in thousand)

Occupation	1940	1950	1960	1970
Trade, public catering etc.	3,351	3,360	4,657	7,810
Science and Scientific service	362	714	1,763	3,385
Education and Culture	2,678	3,315	4,803	8,250
Public health, physical culture and social maintenance	1,512	2,051	3,461	5,240

Source: "The USSR in Figures in 1971", Brief Statistic Manual (Moscow), pp. 180-81, cited in V. Semenov, "New Phenomena in the Structure of Soviet Society", Reprints from the Soviet Press (New York), vol. 16, no. 7, 6 April 1973, p. 9.

TABLE III.15

PROFESSIONALS IN THE SOVIET NATIONAL ECONOMY, 1965-1977
(in thousands)

	1965	1970	1977
Total number of specialists with higher and special middle education employed in the national economy	12,066	16,841	25,178
Total number of specialists with higher education employed in the national economy	4,891	6,853	10,537
of which			
Engineers	1,631	2,486	4,193
Agronomists and veterinarians	303	408	562
Economists	301	493	903
Lawyers	85	106	161
Physicians	501	603	831
Specialists with higher and special middle class as per cent of total labour force	15.7	18.7	23.7
Specialists with higher education as per cent of white-collar employee	23.3	26.4	33.1

Source: Narodnoe Khoziaistvo SSSR v 1977 g. (Moscow: Statistika, 1978), pp. 380-1, 392-3, cited in Severyn Bialer, Stalin's Successors: Leadership, Stability and Change in the Soviet Union (Cambridge, 1982), p. 168.

TABLE III.16

NUMBER OF PERSONS WITH HIGHER AND SECONDARY SPECIALIZED
EDUCATION EMPLOYED IN THE SOVIET ECONOMY AND THEIR SHARE
IN THE TOTAL NUMBER OF WORKERS AND OFFICE PERSONNEL

	1928	1941 January 1	1950 July 1	1960 Dec. 1	1965 Nov. 15	1970 Nov. 16
Number of professionals (millions)	.5	2.4	3.5	8.8	12.1	16.8
As % of total number of workers and office personnel	4.5	7.0	8.0	14.0	15.5	18.8

Note: Office personnel have been taken for white collar employed.

Source: Gordon and Klopov, "The Social Development of the Working Class of the USSR", Soviet Law and Government, vol. 11, no. 3, Winter 1972-73, p. 252.

TABLE III.17

NUMBER OF PROFESSIONALS PER 1,000 WORKERS
(INCLUDING STUDENTS) IN INDUSTRY, CONSTRUCTION AND AGRICULTURE

	1928	1940	1950	1960	1965	1970
Industrial Production personnel of industry	37	99	101	106	126	142
Construction personnel engaged in construction and erection projects	34	82	68	85	112	141
Personnel of state-farms and industry-owned agricu- ltural enterprises	30	43	41	28	35	47

Sources: Gordon and Klopov, "The Social Development of the Working Class of the USSR", Soviet Law and Government, vol. 11, no. 3, Winter 1972-73, p. 253.

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CHAPTER IV

POLITICAL PARTICIPATION AND THE CPSU

Political participation as an important variable in the process of policy-initiation or decision-making is an integral aspect of a political system. The nature, extent and role of the former invariably depend upon and condition the latter. It is natural therefore that the Western scholars' views about political participation in the Soviet Union is shaped by how they perceive the Soviet polity and vice-versa.

Political scientists and especially the "Sovietologists" in the West have not been unanimous on the characterisation and explanation of the Soviet political system. The totalitarian model which was the "dominant paradigm employed by scholars in the 1950s to interpret Soviet politics"¹ had its critics and was discarded (not fully) later. The essence of this model was "a passive society dominated by an elite that was determined to maximize its

¹ Valerie Bunce and John M. Echols III, "From Soviet Studies to Comparative Politics: The Unfinished Revolution", Soviet Studies (Glasgow), vol. 31, no. 1, January 1979, p. 44.

own power and to transform society on the basis of its own ideological perceptions".² Yet, again, the conception of the 'elite', at the very top, which sought total control over society and the citizenry, presumably consisting of a small number of persons was usually reduced to one person, the 'supreme leader'. "In this sense, the totalitarian model made a study of Soviet politics a rather simple affair; there was, after all, only one ring in the circus."³

Apparently the totalitarian model was inspired by the Soviet politics under Stalin's leadership. Khrushchev's succession and certain political and other developments that followed shook this model. It was found that some of the basic assumptions of the model regarding certain rigidities in Soviet polity held no more true under the new leadership. And, as it was, "in both descriptive and predictive terms, the totalitarian model did not say enough about the policy process, for the scholars working within the tradition of the model primarily studied the techniques used by the leader to maintain power".⁴

How far the totalitarian model correctly reflected and analysed the Soviet political process under Stalin is a

2 Jerry F. Hough, The Soviet Union and Social Science Theory (Cambridge, 1977), p. 3.

3 Bunce and Echols III, n. 1, p. 45.

4 Jerry F. Hough and Merle Fainsod, How the Soviet Union is Governed (Cambridge, Mass., 1979), p. 522.

matter of much dispute among Western scholars themselves. The model, for instance, suggested that all the decision-making was concentrated in a narrow 'elite', even in one person, namely, Stalin. But, Jerry Hough, while discussing the extent and meaningfulness of political participation in the Soviet Union, disagrees with this view: "Even under Stalin, citizens were strongly encouraged to criticise administrative agencies and to call for change in their action. Even under Stalin, scholars and other professionals advanced major proposals for change...."⁵ If this argument is taken into account, the growth of political participation in the post-Stalin period may not be entirely due to Khrushchev and Brezhnev as successive leaders of the CPSU. We shall come to it later.

Be that as it may, the disrepute of the totalitarian model in the post-Stalin period gave way to several other models and conceptualisations, advanced as full or partial substitutes.⁶ The immediate replacement was "directed society model" or its variants such as "administered society", "command society", "ideological system", "monist system" and to forth. The scholar's proposing these models retained the totalitarian image of a society directed by the political leaders but saw

5 Ibid.

6 Ibid., p. 523.

"movement in a rational and less rigid direction as well as less reliance on terror";⁷ in short, as "totalitarianism without terror". The 'elite' model too focussed on the manner in which the Soviet politics is controlled but contended that power in the Soviet Union is now exercised less by a single dictator than by a group of officials.⁸

From the point of view of the active participants in the political process, those associated with conflict approach and interest group approach had a rather sharper break with the totalitarian model. They recognised the existence of various groups in the Soviet political system, their role in the initiation of policy proposals and widespread conflict among these contending groups. However, they disagreed on the kind of political conflicts and the essential character of Soviet policy process. The conflict school treated the Soviet policy process "as one featuring conflict between factions based on personalistic ties to important political leaders".⁹ Those adopting the interest group approach, on the contrary, "concentrated their attention far more on bureaucratic or occupational groups".¹⁰ The essence of these two approaches seem to underline the

7 Ibid.

8 Ibid.

9 Ibid., p. 524.

10 Ibid.

various contemporary models, notable differences among them notwithstanding, presumably to explain the nature and role of political participation, among others, in the Soviet Union.¹¹

Two recent developments appear to mark the acute controversies among the Western Sovietologists regarding the analysis of Soviet political system, the nature of political participation included. First relates to the general development of new concepts and methodologies in the West to analyse the political processes and emphasis on comparative political analysis. The second factor, the "Scientific-Technological Revolution" has brought about significant, far-reaching social, economic and political changes in the Soviet society - too obvious to ignore or deny them.

It is difficult to say whether a new generation of Sovietologists in the West has come up, really trying to understand the Soviet society and politics. At least, there

11 Ibid., p. 525. For variants of these models see H. Gordon Skilling and Franklyn Griffiths, eds., Interest Groups in Soviet Politics (Princeton, 1971); Stephen White, "Communist Systems and the Iron Law of Pluralism", British Journal of Political Science (Cambridge), part 1, January 1978, pp. 101-17; M. Gordon Skilling, "Pluralism in Communist Societies", Studies in Comparative Communism (California), vol. 13, no. 1, Spring 1980, pp. 82-90. For a detailed critical exposition of various models of the Soviet Union as also for Hough's own model of "Institutional Pluralism", see Hough, n. 2, pp. 19-108; also Hough and Fainsod, n. 4, pp. 518-55.

is evidence that a growing number of them find the earlier analysis of the Soviet political system full of shortfalls, biased opinions and based on two types of standards, one to judge the Soviet Union and the other for the "Western democracies". Political participation at the level of wider citizen participation, they recognise, exists in the Soviet Union. Consequently, now the discussion among them is centred more on its nature, extent and quality. New concepts and methods are now being evolved and tested to come to terms with the Soviet reality within a liberal framework. The attempt however still seems to be at a nascent stage.

In this context, it is being increasingly realised that the misunderstanding of the Soviet political process has partly resulted from the failure of the Western Sovietology to agree on a common definition of concepts such as "political" and "participation". Also, the existing methodology and even the possibility of inter-system comparisons are found to leave much room for scepticism.¹²

12 "Despite some ten years of collective breast-beating about the evils of contrasting a jaundiced view of Soviet realities with an idealised version of Western democracy, Sovietologists have not seriously tackled the difficult conceptual and methodological problems of inter-system political comparison." T.H. Rigby, "Hough on Political Participation in the Soviet Union", Soviet Studies, vol. 28, no. 2, April 1976, p. 257. Hough appears to be the first to set ball rolling in this respect. See Hough, n. 2. Also Jerry F. Hough, "Political Participation in the Soviet Union", Soviet Studies, vol. 28, no. 1, January 1976, pp. 3-20.

Seweryn Bialer perhaps puts the problem in a rather better perspective: "Depending on one's point of view, an analyst could maintain with equal justification that political participation in the Soviet Union is very high indeed or that it is almost non-existent."¹³ He makes a major distinction between "high politics" and "low politics" and ascribes differences on the perception of political participation in the Soviet Union on choices made between the two. The former involves "the principal political issues of society, the abstract ideas and language of politics, the decisions and actions of the societal leadership".¹⁴ The latter, on the other hand, involves "the decisions that directly touch the citizen's daily life, the communal matters, and the conditions of workplace",¹⁵ Bialer finds a very high proportion of Soviet citizenry regularly involved in "low politics". But then "low politics" also constitute the very substance of the Soviet system of political participation.¹⁶

Moreover, even if exclusion of the Soviet citizenry from "high politics" or direct national policy-making process is presumed, as Bialer does, this may not be something that

13 Seweryn Bialer, Stalin's Successors & Leadership, Stability and Change in the Soviet Union (Cambridge, 1982), p. 186.

14 Ibid., p. 166.

15 Ibid.

16 Ibid., pp. 166-7.

would mark the Soviet Union alone. For one thing, this seems to be universal. In any case, the problem is still a challenge to political scientists. For another, public participation on the decision-making process in general and at any level in the West, the yardstick to measure the Soviet case, are largely exaggerated and glorified. In the United States of America, for instance, "even on such decisions as the location of a school and the seeking of redevelopment funds from the federal government, Dahl found that the influentials were a relative handful of people who took a particular interest in the policy question at issue".¹⁷ In this respect, the Soviet citizens seem to be far more influential and active.

Coming to the concept of "participation", should the "real", "authentic" participation mean "spontaneous actions alone, fully voluntary and largely uncoordinated from a center?" Apart from how far such "freedom" is "necessary", "inevitable" and "functional" in different systems, the fact is that even in the USA such participation has been extremely low.¹⁸

17 Hough, n. 12, pp. 16-17.

18 Hough cites, among other things, the fact of "extremely low participation" even in marches and demonstrations in the United States. In a national survey in 1970, only a bare majority of respondents even conditionally approved of these forms of action. See *ibid.*, especially p. 16.

On the other hand, if one "looked simply at the activities of Soviet citizens which are socially oriented, that is, are neither private nor occur within the family, and define them as participation, one would be struck by their relatively high level. Under Soviet conditions, moreover, where most social activities have political undertones because of the form in which they originate or because of the way in which the authorities view their effects, one would describe this phenomenon as 'political participation'."¹⁹

Indeed, the range of political participation is extremely wide in the Soviet Union. It has wider scope than what is generally associated with the decision-making at local or national levels. In a crude and general way it may be said that since all social activities are "political" due to the alleged or real control of the "party" in every matter, participation in any of them amounts to 'political', inso facto. But even otherwise, since all 'local and state' politics in the Soviet Union essentially centres on decisions, made by governmental and party 'administrators', many of the activities, generally dismissed as the 'prodding of administrators' by the Western scholars, are quite similar to the activities defined as 'political' for the West. On the contrary, the merging of all institutional life into the

¹⁹ Bialer, n. 13, p. 186.

governmental sphere means that many matters not considered political in the West are so in the Soviet Union.²⁰

The fact however is that political participation or political system cannot be understood in divorce from the larger social system as such. A political system itself is born of and conditioned by the socio-economic system of a given society. Indeed, the social, economic and political structures are so intertwined that multi-dimensional cause-and-effect take place among them. Political participation as a variable in the political system must be influenced by these and vice-versa. Also that the characteristics of political participation therefore must vary from one type of society to another. It may be restricted to a negligible few as in many of the Third World "dictatorial" polities or may have somewhat wider base in liberal-democratic ones as in the West. It has altogether different meaning in a socialist society appreciation of which perhaps could have helped many of the Western scholars from misunderstanding of the political process in the Soviet society.

As it is, in the bourgeois democratic republics people possess equal rights by only law and in fact are debarred by a great many devices and subterfuges from participation in political life and enjoyment of democratic

²⁰ Hough and Fainsod, n. 4, pp. 480-81; Hough, n. 12, pp. 18-19.

rights and liberties. The socialist democracy, on the contrary, ensures constant and decisive participation of the people in the democratic administration of the state. Socialist democracy passes through "many stages of development and improvement, gradually maturing as the tasks of socialist and communist construction are solved and the grim legacy of the old system based on exploitation is gradually overcome in social relations and public consciousness".²¹ Political participation in a socialist democracy therefore must be examined as a dynamic process of consolidation and development of the forms and methods of administration and political organisation of society rather than simply as a collection of political institutions and functions established once and for all.

Institutionalisation, Popular Political Participation and the CPSU

Much of the discredit that many Western paradigms of the Soviet Union have suffered is due to the fact that Soviet political institutions, including the Communist Party of the Soviet Union (CPSU) have not received due importance as institutions of mass political participation. In the 1950s it was even "fashionable in the West to argue that the CPSU was not 'really' a political party".²² The most

21 G. Shahnazarov, Socialist Democracy: Aspects of Theory (Moscow, 1974), p. 8.

22 Ronald J. Hill and Peter Frank, The Soviet Communist Party (London, 1981), p. 138.

celebrated formulation in this regard was made by Sigmund Neumann in 1956:

...the very definition of party presupposes a democratic climate and hence makes it a misnomer in every dictatorship. A one party system (le parti unique) is a contradiction in itself. Only the co-existence of at least one other competitive group makes a political party real. 23

The theorists of totalitarian model of the Soviet Union too presumed such assumptions in their work.²⁴

Since Neumann expressed his view, much water has flowed down the rivers of the West. Modern political science, with the development of the comparative study of politics since the 1960s has embraced single-party systems in its study of political parties. Though by no means all the Western scholars even in recent times have shunned from Neumann's assumptions, many have recognised the CPSU as an institution of political participation.

This recognition partly results from the realisation that spontaneous, voluntary or out of the system participation is not the only or necessary form of political participation. Such participation, since, is not permissible in the Soviet Union, institutions are attached with much importance as channels of political participation

23 Cited in *ibid.*, pp. 138-9.

24 For details and other instances see *ibid.*, p. 139.

and process. All the citizen's political activities have to function within the institutional framework both to obtain legitimacy and meaningfulness. Or as Hough puts it: "The distinctive feature of individual participation in the Soviet Union is that people must work through official channels."²⁵

The further institutionalisation and development of the political institutions in the Soviet Union was inevitable under the socio-economic changes that we have credited largely to the SR. For, "while a modern polity in the process of socio-economic and political modernization produces and requires an increase in the intensity and scope of political participation, it requires as well a high level of political institutionalization which will keep pace with the increased participation. Political instability results if the level of political institutionalization is not high enough to absorb the increased pressures of the participation."²⁶

Many Western analysts have alleged a decline of participatory politics under Brezhnev in contrast to the Khrushchev period. As will be discussed later, the level of political participation in fact became higher during Brezhnev, changes in emphasis, directions and forms of political participation notwithstanding.

25 Hough and Fainsod, n. 4, p. 547.

26 Bialer, n. 13, p. 165.

The essential and natural difference seems to lie in the relationship between participation and institutionalization. Thus,

One may suggest that in the Khrushchev period the levels of participation and institutionalization did not keep step and, indeed that their respective directions ran counter to one another. Khrushchev, in his attempt to shake up the system, destabilised political institutions. He may be said to have deinstitutionalized Soviet politics somewhat at the very time that he conducted a partially successful effort to increase popular political participation...participation also increased during the Brezhnev period and went less noticed because the institutionalization of Soviet politics matched its pace of development. 27

Be that as it may, the CPSU has a distinctive place among the political-institutions of the Soviet political system. Indeed "it has strong claims for recognition as one of the most powerful political institutions in any country in the world".²⁸ Almost all active participants in the Soviet political process are party members. The ultimate policy-making organs at the levels of both the centre and the lower territorial units are the respective collective party bodies. Seen in a comparative political perspective, in functional terms, "the real cabinet of the Soviet political system is the party Politburo, the real parliament is the

27 Ibid.

28 Hill and Frank, n. 22, p. 1.

party Central Committee, and the real prime minister is the party General Secretary".²⁹

Seen from a different angle, the CPSU may be said³⁰ "to perform the function of aggregating political interests". In fact, it is the highest form of socio-political organization of the Soviet people which guides all processes in the life of society, and directs and co-ordinates the activity of all organisations, governmental and civic.³¹ Its functions are both varied and far-reaching. They are as broad and extensive as is the Soviet political, governmental, economic, cultural and social system itself. It defines the goals and tasks and exercises leadership of the state in all fields of its activity.³² The policy of the CPSU is the basis of the activities of the Soviet state. More than just the vanguard of the working class and the dictatorship of the proletariat, the CPSU is "the guiding compass as well as the bow-spirit for the conduct of virtually all organized activity in the USSR".³³

29 Hough and Fainsod, n. 4, p. 362.

30 David Lane, The End of Inequality? Stratification Under State Socialism (Harmondsworth, 1971), p. 120.

31 P.F. Figalev, "Improving the Functioning of the Soviets of Working People's Deputies", Soviet Law and Government (New York), vol. 9, no. 3, Winter 1970-71, p. 238.

32 Ibid.

33 Richard C. Gripp, Patterns of Soviet Politics (Illinois, 1963), p. 195.

The activities of the CPSU in the domestic life are in the main: (a) to establish plans and broad policies for various aspects of Soviet life and to oversee their fulfilment; (b) to initiate most of the important governmental acts, decrees and reorganisations; (c) to supervise, at least, indirectly normal governmental functions at all levels - central, regional and local; (d) to select the cadres for present and future officials in party, government, industry and agriculture; (e) to establish the structural framework and operational guidelines for education, cultural life and for such tasks as scientific investigations and technical inventions.³⁴ Along with emphasis on modernisation of centralised command economy (combining the advantages of socialism with those of the STR), there has been a vigorous campaign of reaffirming the party's 'leading and directing role' vis-a-vis state and voluntary bodies, the extension of powers of 'control' to all primary party organisations and massive re-training programmes to better equip party officials for these tasks.³⁵

The essence of the party's leadership is characterized by its political and not administrative nature. It lays down the general political line, indicates the goal and works

34 Ibid.

35 T.H. Rigby, "Soviet Communist Party Membership Under Brezhnev", Soviet Studies, vol. 28, no. 3, July 1976, p. 319.

out the way to achieve it by uniting the efforts of the organs of state administration, mass organisations, including the cadres of the party itself, and a vast body of activists outside the institutions.³⁶

Intensification of party leadership and perfection of its forms and functions are an indispensable condition for the further development of socialist democracy. This is especially significant in the period of full-scale communist construction which cannot be confined merely to material and technical basis of communism and must take into account political consciousness and political activity of the masses and development of the political institutions as such. Indeed, both of them interact and reinforce each other.

The Programme of the CPSU, among other things, underlined the enhancement of the role and development of the institution of the Communist party in the stage of full-scale communist construction. This reemphasis and reevaluation itself underscored the new situation arising from the growth of productive forces and of socialist revolutions as brought about by the STR.

The Programme noted that the enhancement of the role of the party in the life of Soviet society in the new

36 V.M. Chkhikvadze, ed., The Soviet Form of Popular Government (Moscow, 1972), p. 164; E. Chekharin, The Soviet Political System under Developed Socialism (Moscow, 1977), p. 45.

stage of its development derived from "the growing scope and complexity of the tasks of communist construction, which call for a higher level of political and organisational leadership; the growth of the creative activity of the masses and the participation of fresh millions of working people in the administration of state affairs and of production; the further development of socialist democracy, the enhancement of the role of social organisations, the extension of the rights of the Union republics and local organisations; the growing importance of the theory of scientific communism, of its creative development and propaganda, the necessity for improving the communist education of the working people...."³⁷

It further noted the need of a new, higher stage in the development of the party itself in its political, ideological and organisational work which would be in conformity with the full-scale building of communism. The party was to continuously improve the forms and methods of its work, so that its leadership of the masses, of the building of the material and technical basis of communism, of the development of society's spiritual life would keep pace with the growing requirements of the epoch of Communist construction. The party was to lead in the organisation of internal party life, thus serving as an example and model in

37 Programme of the Communist Party of the Soviet Union in The Road to Communism: Documents of the 23rd Congress of the Communist Party of the Soviet Union (Moscow, 1962), pp. 583-4.

developing the most advanced forms of public communist self-government.³⁸

The Programme listed the principle of collective leadership, enhancement of the responsibility of party organs and their personnel to the party rank and file, promotion of the activity and initiative of all Communists and their participation in elaborating and realising the policy of the party, and the development of criticism and self-criticism as an imperative condition of the ideological and organisational strength of the party itself, of the unity and solidarity of party ranks, of an all-round development of inner-party democracy and an activation on this basis of all party forces, and of the strengthening of ties with the masses.³⁹

In order to effect the principle of collective leadership consistently, to ensure a greater influx of fresh party forces into the leading party organs, to properly combine old and young cadres and to avoid the possibility of an excessive concentration of power in the hands of individual party officials, the programme outlined the following measures:

- (1) Introduction in practice of a regular renewal, in certain proportions, of the members of all elected party

38 Ibid., p. 584.

39 Ibid.

bodies - from primary organisations to the Central Committee at the same time preserving continuity of leadership. The Programme made it imperative that at all regular elections, not less than one-quarter of the members of the Central Committee of the CPSU and its presidium would be renewed. However, Presidium members could not be elected, as a rule, for more than three successive terms. An exception was made in case of those particular party workers who, by virtue of their generally-recognised authority and high political, organisational and other abilities, could be successfully elected to the leading bodies for a longer period, provided not less than three-quarters of the votes were cast in their favour by secret ballot. Similarly, members of the Central Committee of the Communist parties of Union republics, of territorial and regional committees would be renewed by not less than one-third at each regular election, and those of area, city and district committees, and the committees and bureaus of party organisations by not less than one-half. They could be elected consecutively for not more than three terms, and secretaries of the primary party organisations for not more than two consecutive terms. In exceptional conditions, i.e., in consideration of the political and professional qualities of a person, a party organisation could elect a member to its leading body for a longer period, provided not less than three-quarters

of the members attending voted in favour of him. A member from any leading organs of the party could be removed by two-thirds majority in a secret ballot.⁴⁰

(ii) Extension of the application of the elective principle and of accountability in party organisations at all levels, including those working under special conditions, e.g., the Army and the Navy.⁴¹

(iii) Enhancement of the role of party meetings, conferences, congresses and plenary meetings of party committees and other collective bodies. Creation of favourable conditions "for a free and business-like discussions within the party of questions concerning its policy and practical activities, for comradely discussions of controversial or insufficiently clear matters".⁴²

(iv) Steady reduction of the salaried party staff and enlistment of communists more exclusively as non-salaried workers performing voluntary works.⁴³

(v) Promotion of criticism and self-criticism as a means of disclosing and rectifying mistakes and shortcomings, and thereby properly educating cadres and further improving work.⁴⁴

40 Ibid., pp. 585-6.

41 Ibid., p. 586.

42 Ibid.

43 Ibid.

44 Ibid.

to play in the policy-process. In other words, even if nearly all policy-making takes place within the party, broadly speaking, or even though the ultimate authority lies with the top party organs, this does not say much about the actual policy-making process in the system. For, as Hough and Fainood put it,

if the Politburo and the Central Committee are significant in the policy-making process, then so, surely, are those 'administrators' who sit on those committees and so too are the large organizations led by those men. In fact even if the party Secretariat were to have the final say on every important question (and this is most improbable), the executive institutions still would be reservoirs of expertise and centers of specialized interests and they would still be significant participants in the battle for influence over policy. 2

This intricate web of political relations, the blurring of the edges between the party and the state is not confined to the central level. This is equally true in case of the local level.³

It is obvious therefore that the relationship between the CPSU and the institutions of the Soviet State is extremely complex. In more fundamental terms, it appears to be a dynamic relationship varying over time and space,

2 Ibid., p. 363.

3 For detailed arguments and examples, see Ronald J. Hill and Peter Frank, The Soviet Communist Party (London, 1981), pp. 107-8.

Given this explicit political nature and the most dominant character of the CPSU as a political institution in the Soviet political system, it is here that the most significant type of political participation is discernible. It may even be said that the strong framework of party activity is the backbone of the entire participatory system and in the ultimate analysis its control.⁴⁵ Consequently, the CPSU is the most appropriate institution to gauge the extent and nature of mass or popular political participation of the Soviet citizens.

An important index of the development of the CPSU in particular and of the Soviet social and political life in general has been the growth-pattern in the membership of the CPSU and its social composition. Another index is the growth of the network of party organisations and their powers and functions. Since we are concerned with political participation of the kind of, so to say, "low politics", we shall deal with the pattern of the party networks at lower levels and with positive changes, if any, in their powers and functions.

Membership and Social Composition

As Hough and Fainsod have observed, "One form of

45 Bialer, n. 13, p. 190.

Soviet political participation quite distinct from that in the West is membership in the Communist Party".⁴⁶ While discussing the party membership from the point of view of participation, we are not referring to the higher and middle levels of the party 'aktiv' "directly and constantly engaged in the business of government". We are rather concerned with the lower 'aktiv' and the rank and file members who are engaged primarily in the nonadministrative jobs but constitute the clear majority of the entire party membership.⁴⁷

The amount of attention the differences in party membership over time and across sociological lines have received in the Soviet Union and elsewhere does imply a notion that membership in the party does have some meaning. What is that? What is involved in party membership for the majority of members in terms of political participation? To be more precise, what does membership in the party mean so far as involvement in the decision-making process is concerned?

To begin with, membership of the party by itself provides certain political status, involvement and duties to the Soviet citizens. This is but natural given the functions and power of the party which is after all not an abstraction but a concrete entity functioning ultimately

46 Hough and Fainsod, n. 4, p. 320.

47 Bialer, n. 13, p. 190.

through its members. Party membership, for example, makes available many a politically relevant information not otherwise available.⁴⁸ Then, party membership involves regular attendance at party unit meetings where issues of 'high' and 'low' politics are discussed. Even regular participation in party education has long-range and direct, practical political aims for the members. But, most important is the involvement of party members in socio-political duties. They must engage in the "regular, relatively intensive and burdensome" task of working not only with other party members but primarily with non-party citizens to whom the party's point of view must be represented.⁴⁹ The continuing requirement that a party member "work in one of the party organizations" and that these organisations perform important supervisory responsibilities within the institution in which they are located almost "forces" the members to participate in some type of activity relevant to decision-making process.⁵⁰

It is an usual practice among the Western Sovietologists to seek a dividing line, as in many matters relating to the Soviet Union, in the membership patterns of the CPSU. This may not be objectionable in itself and even inevitable. But since this is sought to

48 Hough and Rainsod, n. 4, p. 355.

49 Bialer, n. 13, pp. 190-91.

50 Hough and Fainsod, n. 4, p. 355.

be achieved on the basis of the personalities, the important socio-economic and political factors are generally blurred, if not altogether missed. While the former may be a factor, sometime even quite significant, it being used as the only explanation in social sciences seems to be undesirable. In the case of the Soviet Communist Party, the suggestion is made of qualitative changes owing to the ascendancy of Khrushchev (after Stalin), or further due to the fall of Khrushchev and succession of Brezhnev. Some Western scholars themselves have questioned this practice.

We seek to use 1959 as reference point for some important reasons. First, this part of the study has to be collateral with the others we did earlier and where it was the reference year. Given our basic assumption of socio-economic and political changes being interrelated this is natural. Apart from this, this year is really a turning point in the recent years for the major transformation overtaking the CPSU.

For one thing, analysis of the CPSU membership invariably comes across far more ups and downs in the pre-1959 period than in the post-1959 one. This is in a sense inevitable.

The Soviet society had been passing through the critical stages of transformation in those years after the

Revolution; collectivisation, industrialisation and other related socio-economic processes witnessed rather dramatic impact on and changes in the membership of the CPSU. Then, there had been significant demographic factors, natural as well as man-made, for instance, impact of the two world wars. By the late 'fifties and certainly by 1959 the Soviet Union had overcome or passed out of many of those adverse situations. And even though some of the impact remain to date, more regular trends could be observed since.

For instance, in March 1919 total membership of the CPSU was 350,000 which rose to 7,843,196 by 1 January 1958. Thus, in 39 years the increase was only 7,493,196 while during only the next 16 years (from 1 January 1959 to 1976) it was 7,399,760.⁵¹ While both pre- and post-1959 periods share the tenure of Khrushchev, a tremendous increase is observed in the latter period. Secondly, this increase was despite the alleged strict admission policy pursued for rather longer years by Brezhnev after Khrushchev's ouster from power.

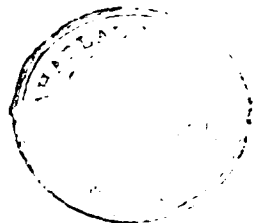
What do we mean when we say that unlike pre-1959 period, the post-1959 period is also marked by party

51 "Department of Party Organizational Work : The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, p. 6; "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, Winter 1976-77, p. 7.

membership trends that have been quite regular? First, the number of party members has been rising every year, and relatively smaller number of them are being expelled. Secondly, changes in the rate of increase in party membership and in its social composition have, in recent years, been "incremental in character". Further, these have tended to become more closely associated with the changes in the societal groups, i.e., classes and strata, from which members are normally recruited. In the past, none of these generalisations would have been possible or, the least, accurate. For example, the size of the party fluctuated enormously from period to period, in many cases the years of mass enrolment alternating with those of "mass purge".⁵²

Similar variation is discernible also in case of the educational and occupational profiles of the party membership. The eighteenth Party Congress held in March 1939 formally abolished all class-based distinctions in the rules for party admission. This however reflected an earlier change in actual recruitment practices. Thus, while 92 per cent of party in 1932 was worker in social composition, this figure had dropped to 65 per cent by the beginning of 1941. As for the actual practice, among

52 Hough and Fainsod, n. 4, p. 330.



the new candidates recruited between November 1936 and March 1939 only 41 per cent were workers in contrast to 43.8 per cent of white-collar employees and compared to 15.2 per cent of peasants.⁵³

A few more examples are in order. Between June 1941 and January 1946, a total of 5,319,297 persons were admitted to candidate membership and 3,615,451 to full membership. This did not add to any substantial growth in the total membership of the party since by early 1946 it stood at 5,510,862 persons, only 2,110,887 persons more than the total membership of 3,399,975 of January 1941.⁵⁴ The major reason, of course, was the death of over three million "Communists" during the war, apart from those who had been captured.⁵⁵ Without this fact being taken into account the admission statistics may be misleading. Then, to cite another instance, at the beginning of the war, 39.8 per cent of the members had at least some secondary education; this number grew to 57.4 per cent at the end of the War.⁵⁶

The party recruitment in the post-Second World War period up to 1959 marked an overall and singular

53 Ibid., p. 329.

54 Ibid., p. 330; see also Table IV.1.

55 Hough and Fainsod, *ibid.*

56 Ibid., pp. 330-31.

pattern of a slowing down in the rate of increase in party membership: it grew by 841,710 persons between January 1946 and 1949; by 557,043 between January 1950; and by 276,297 during 1953-56. It is obvious that the "really low levels of party admission in the post war period actually came after Stalin's death rather than before it".⁵⁷

Add to this the fact that by the late '40s the size of the pool of eligibles for normal recruitment had fallen considerably due to the impact of the two wars on the generation born between 1910 and 1925. Indeed, under the circumstances, the admission levels of the late '40s seem to be not so small but so large. Further, the ratio of new candidates to the number of men in the twenty-four to thirty age group (the group moving into the period of concentrated enrolment), is not much lower than during the membership drives of the late 'fifties and early 'sixties.⁵⁸

Still more, as Hough and Fainsod prove, the declining trend of the early and middle 'fifties was taking place "in the face of a major increase in the size of the pool of eligibles".⁵⁹

These findings have two important implications. First, they undermine the allegations against Stalin's

57 Ibid., p. 334.

58 Ibid.

59 Ibid.

leadership to explain a low level of party recruitment during his tenure. Secondly, if this be the case, the "liberalisation" per se in admission policy attributed to Khrushchev has no basis in so far as the above hypothesis rests on the relative criterion of a restricted membership policy followed by his predecessor.

As the statistics show,⁶⁰ it was only in the late 'fifties that the number of persons enrolled in the party began to increase. But it was a "fairly gradual process," particularly given the concurrent rise in the number of eligibles, and it was not until 1959 that the proportion of male eligibles admitted exceeded the level of the late 1940s".⁶¹ Figures indicate that the party membership rose by 1,121,620 persons between January 1947 and January 1956, i.e. in nine years, and by 1,065,610 persons between January 1956 and January 1959, i.e. in only three years. It rose far higher by 1,651,937 persons from January 1959 to January 1962. In the next three years (1962-65), the figure soared to 1,867,101. The average yearly increase from January 1956 to 1959 was 355,203 while that from January 1959 to 1965 was more than 569,839.

According to Hough and Fainsod, "in broad historical perspective, even the growth in membership in the Khrushchev

60 See Table IV.1.

61 Hough and Fainsod, n. 4, p. 334.

era could be seen as a belated enrolment of persons who would normally have been admitted into the party in the early and middle 1950s had it not been for the tight membership policy in effect at that time".⁶² If there was indeed a "tight membership policy" it was when Khrushchev himself was the First Secretary. Secondly, as argued earlier, even the ratio of new members to the most "eligible" group in the population was not much higher than the late '40s even in the later and final years of Khrushchev. "Liberalisation" in the admission policy does not therefore explain much, at least in the long-run.

Could it not be that even while the pool of eligibles was large, there was a dearth of those who could fulfil some other criteria like high education to enter into the party? At the same time, could it not be argued that the social, economic and cultural changes in the Soviet society brought about by the STR - beginning from the late 1950s - had begun exerting pressures for increased citizen participation in the political process? These two hypotheses may explain the apparent contradiction in the recruitment pattern during Khrushchev's stewardship. The basic assumption here is that the party leadership did see the

62 Ibid., p. 335; italics provided. T.H. Rigby too shares the view. See, T.H. Rigby, Communist Party Membership in the USSR, 1917-1967 (Princeton, 1968), pp. 296-302.

threshold dynamics of the society (thanks to the SIR), wanted it to be present in the party as well, of course a slow process at the initial stage but to catch momentum and regularity in the future. The best confirmation of these assumptions is the changes in social composition of the party.⁶³

In fact, Hough and Fainsod themselves admit that the "Khrushchev expansion was not a simple expansion in numbers; it also involved a number of significant changes in the background of those admitted. Some of the changes (for example, that in the proportion of members with at least a high school diploma from 33.9 per cent in 1952 to 47.7 per cent in 1965) were largely the produce of simultaneous changes in the population as a whole...."⁶⁴ They also point out a sharp rise in the proportion of workers admitted into the party. "In the 1952-55 period some 28.3 per cent of the new candidates were workers by occupation at the time of their admission (only 23.3 per cent in 1952), but this figure increased to 44.7

63 See Tables IV.4, IV.5, IV.6, IV.7, IV.8 and IV.9.

64 Hough and Fainsod, n. 4, p. 335. The number of party members with higher education in 1959 had increased by 23.9 per cent compared to 14.7 per cent in 1956, and 11.8 per cent in 1952. See Leonard Schapiro, The Communist Party of the Soviet Union (London, 1970), p. 584.

per cent for the 1962-65 period."⁶⁵ This increase is attributed by the Western scholars to a "pro-worker" recruitment policy followed by Khrushchev. This may be so but the workers admitted also had better education and higher skills than, say, a decade earlier. Cannot it be said that the workers now in more numbers fulfilled the "exacting demands" of better education and higher skills, inter alia, to be in the party.⁶⁶

Yet, the "liberalisation" policy in itself as a factor to explain the party growth during Khrushchev period could be sustainable if there was a reverse during the successive Brezhnev period. Indeed, many of the assumptions the Western Sovietologists use to characterise the party expansion under Khrushchev have been based on the interpretation of the party membership trends after his ouster. Thus, a number of Western observers have cited figures on party admissions and expulsions during 1964-76 period to suggest that the Brezhnev regime reversed the

65 Hough and Fainsod, n. 4, p. 335.

66 Between the 20th and 22nd Congresses, among those admitted as candidate members only 40.7 per cent were workers, whereas between 1961-65 they constituted 47.6 per cent. Among the office and professional employees joining the party during 1961-65, over two thirds were from the technical intelligentsia and other specialists. Half of these new members were having higher, incomplete higher or secondary education qualifications. See L.I. Brezhnev, "Report of Central Committee of the Communist Party of the Soviet Union to the 23rd Congress of the CPSU in 23rd Congress of the Communist Party of the Soviet Union (Moscow, 1966), p. 121.

policy of party admission followed by Khrushchev, and that this was part of a general repudiation of Khrushchev's dedication to public participation in politics.⁶⁷ Figures do indicate that the number of new candidate membership recruits which was "very high" in 1965 (750,000 persons) came down sharply to 511,000 persons in 1966. In 1967-70 period the average enrolment did rise to 620,000 but this was still 20 per cent lower than the 1960-64 level. Again, the admissions to candidate membership from 1971 to 1975 dropped to an average of 520,000 a year.⁶⁸

In addition to the reduced intake of members, the party also witnessed an apparently increased number of persons leaving the party during Brezhnev years. The annual attrition rate in membership thus rose from 150,000 a year in the 1962-65 period to 195,000 a year from 1966 to 1971, to 251,000 a year in 1971-72 and to 271,000 a year in 1973-75.⁶⁹

67 Hough and Fainsod, n. 4, pp. 336-7.

68 Ibid., p. 335. According to Rigby, the new recruits averaged 762,000 per annum during 1962-65 but contracted to 598,000 in 1966-70, to 493,000 in 1971 and to 469,000 in 1972. Notwithstanding some recovery later, the fresh recruitment figure for 1974, 550,000 candidates was still considerably lower than prevailing under Khrushchev. See Rigby, n. 35, pp. 319-20. See also Table IV.2.³

69 Hough and Fainsod, n. 4, pp. 335-6.

Taking the attrition rate first, without which the party membership would have been rather larger, there are now enough evidence to disprove the general assumption of Brezhnev trying to undo Khrushchev's 'pro-expansion', or 'pro-worker' recruitment policy. Some of the increase in attrition rate between 1966-1975 must be attributed to the aging of membership and therefore a higher mortality rate - perhaps 130,000-140,000 a year in the early seventies compared with some 75,000 a year a decade earlier. The higher attrition rate during 1971-75, especially between 1973-74 is associated with the 'exchange of party cards' - the seemingly affected number having been estimated at 347,000. However, the analysis of different factors have shown that "a substantial proportion of these 347,000 - perhaps nearly half of them to judge by figures from the late 1960s - would have dropped out or been expelled in the course of these two years even without the exchange of documents campaign".⁷⁰ Obviously then some policy decisions might have been taken as an important 'organisational-political matter' to intensify the discipline and

70 Rigby, n. 35, p. 322. Unger attributes so a still lower number, 150,000 attritions to the 'documents campaign'; for detailed discussions see *ibid.*, pp. 320-22; Hough and Fainsod, n. 4, p. 336 and Aryeh L. Unger, "Soviet Communist Party Membership under Brezhnev: A Comment", Soviet Studies, vol. 29, no. 2, April 1977, p. 308.

level of party activity of members. They were indeed taken but only to get rid of those who did not live up to the prescribed standards; there is no hard proof to support the thesis of a 'motivated' campaign.

How far were policy-decisions (and nature thereof) involved in the alleged "low" recruitment trends? Indeed, within a year after the fall of Khrushchev, the new party leadership under Brezhnev criticised the laxity in maintaining admission standards in the preceding years and directed lower party organs to be more cautious in their admission policy.⁷¹ Notable in this context is the widely publicized criticism of the Kharkov regional party organisation for 'chasing after numbers' and then reminding the local and regional party organisation that the "growth in numbers was not an end in itself".⁷²

Equally significant is the fact that this criticism and following consequences did not wholly owe to the Brezhnev's leadership of the party. For, as Rigby has argued, some tentative steps in this direction had been taken even before the removal of Khrushchev, but these

71 Hough and Fainsod, n. 4, p. 335.

72 Donald R. Kelley, "The Communist Party", in Donald R. Kelley, ed., Soviet Politics in the Brezhnev Era (New York, 1980), p. 48.

were greatly stepped up in 1965.⁷³ Apart from this, while assessing the party admission policies and trends in the Brezhnev period a few more facts must be kept in view.

First of all, the reduction in party membership coincided with a contraction in eligible age group in the population, by approximately one-third. If at all and to the extent that the demographic trends were responsible for changes in party recruitment levels in the late Stalin and Khrushchev periods, the slowing down in the party membership under Brezhnev regime up to 1975 too must be understood in terms of the extremely low birth rates during the Second World War.⁷⁴

Secondly, even in 1965-75 period the level of party admissions "actually remained quite high". In absolute terms, the number of admissions was still greater than the norm of the late '50s. Then the percentage increase in the size of the party was well above, more than the twice, the increase in the size of the adult population. Thus, while the adult population rose by 15 per cent between 1965-75, the number of party members

73 Rigby, n. 35, p. 319. Qualitative rather than quantitative expansion alone was emphasized in the 23rd and 24th Congress of the CPSU. See Kelley, n. 72, p. 48.

74 Rigby, n. 35, p. 320; for details see Hough and Fainsod, n. 4, p. 338.

and candidates grew by 33 per cent in the same period.⁷⁵

A similar trend is observed in comparison to the general population growth. If the whole of the post-Khrushchev decade, January 1965-January 1975, is taken into account party growth is found nearly three times as fast as the general population: party membership increased from 11.8 million in 1965 to 15.3 million in 1975, i.e. by 3.5 million or 29.7 per cent as against a population growth from 229.6 million to 253.3 million, i.e. by 23.7 million or 10.3 per cent over the same period. If only the early half of 'seventies is considered, in which party growth decelerated further as a result of the exchange of party cards, still party growth is found running at nearly twice the rate of general population growths from 14.0 million to 15.3 million, i.e. by 1.3 million or 9.3 per cent, while the population rose from 241.7 million to 253.3 million, i.e. by 11.6 million or 4.8 per cent. The party growth rate in 1975, when the exchange of party cards had run its course, was 2.2 per cent in contrast to a "current" population growth rate of approximately one per cent per annum.⁷⁶

Obviously, such effect as the contraction of younger age groups in the population might have had on the

75 Ibid.

76 Unger, n. 70, pp. 308-9.

level of party recruitment was largely offset by the more intensive saturation of those eligibles.⁷⁷ Further, even relative to the declining number of eligibles in the twenty-four to thirty age group, the scale of the new admission hardly declined at all from the very high rates of the early 1960s - except, perhaps, for a short while just after the 1965 decision on the Kharkov organisation.⁷⁸

All of this would suggest that general population growth and demographic factors such as the size of eligible age groups may be historical circumstances under which the party admission takes place. But they are not reliable indicators for a thorough analysis of the CPSU membership patterns, more so in the recent years of the present study. It is also evident that the admission policies for membership have never been restrictive or expansion - oriented

per se.

Could the social composition of the new recruits or of the party as a whole provide a clue? The impact of the STR on social changes and their reflection in the social composition of the party membership recruitment in 1959-1965 has already been noted. Equally important fact regarding admission policy of the 'Brezhnev regime' is that "it continued, and, indeed intensified, the trends toward

77 Ibid., p. 307.

78 For details see Hough and Fainsod, n. 4, pp. 338-9.

broadening the social composition of the party that Khrushchev had initiated".⁷⁹ The social composition of the party seems to be the most, if not the only, important indicator in the analysis of membership trends during 1966-75 as well.

The two major features of the party membership's social composition in the Brezhnev period (till 1975 but later too as will be seen later) have been the trends of the higher and growing representation of workers and better educated in the party. Thus, compared with 1956-61 period in which among the new party recruits, workers were 41.1 per cent, collective farmers 22.0 per cent, specialists 23.3 per cent and other white-collar workers 12.5 per cent, the figures in 1962-65 period were 44.7 per cent, 15.0 per cent, 28.2 per cent and 11.1 per cent respectively; in 1966-70, 52.0 per cent, 13.4 per cent, 26.4 per cent, and 7.5 per cent respectively; the corresponding figures for 1971-75 were 57.6 per cent, 11.3 per cent, 24.5 per cent, and 5.2 per cent.⁸⁰

The Western scholars have tried to explain the higher party representation among workers by hypothesising

79 Ibid., p. 339. They also note that the "increasing percentage of workers among the new candidates into the party was the most dramatic indication of the continuation of the Khrushchev policy." See *ibid.*

80 See Table IV.4.

that the main plank of party admission policy under Brezhnev too has been the recruitment of workers.⁸¹ Both the statistics and the official discussions in the party⁸² do suggest this. What has intrigued them is the fact of simultaneous increase of better educated among the party members. The long-established trend to higher educational levels in the party has continued, and indeed if anything, accelerated in the recent years. Between 1966 and 1975 the proportion of party members with higher and complete secondary education increased from 49.1 per cent to 65.3 per cent. On the other hand, the figure for those with incomplete secondary and primary education dropped over the same period from 50.9 per cent to 34.7 per cent.⁸³ What is notable here is the fact that party educational levels have advanced more rapidly than the continuing rapid improvement in the educational levels of the population at large. It is no surprise then that the party 'saturation' levels amongst those with full secondary or higher education has tended to rise.⁸⁴

What repercussions does have this higher education on the class composition of the CPSU? Rigby sees an

81 See, for instance, Rigby, n. 35, p. 329.

82 Ibid.

83 See Table IV.5.

84 Rigby, n. 35, pp. 327-8.

apparent contradiction in the increased worker recruitment and the rapid improvement in the party educational levels. He attempts to reconcile these two facts. This would be possible, according to him, if it could be demonstrated that "the majority of workers now being admitted to the party have completed their secondary schooling, and that the majority of white-collar recruits are persons with a higher education".⁸⁵

He does find statistics to support the second assumption. For the first he takes up certain circumstantial evidence to support it but qualifies it with the view that the admission of workers with higher education will be followed by their promotion out of manual jobs and into the white collar ones. And that "this provides an added reason for the intensification of worker recruitment, which must attain levels adequate to provide for such promotions without a drop in party representation among those remaining in manual jobs".⁸⁶ He sees in this pattern some kind of "stabilization" for the social composition and membership policies of the CPSU.

A.L. Unger while commenting on Rigby's article questioned some of his arguments, reinforced others but

85 Ibid., p. 331.

86 Ibid., p. 332.

differed in the thrust of the overall perspective of the party's character and its 'dilemma of growth'. As he puts it:

In any event, for the Western analyst of the Soviet party's membership development it may not be altogether without interest that a growing proportion of party recruits is drawn from working-class backgrounds; but it is surely of no less interest that very many of such worker communists enter the ranks of the white-collar intelligentsia shortly after entering the party. 87

In particular, while comparing the net increase of all party members with that of party members with higher education during 1966-75, he finds that four out of every five members added to the party's rolls between 1971 and 1975 were persons with higher education.⁸⁸ This growing trend of higher education among party recruitment, regardless of the figures on the 'occupation' of party recruits, according to Unger, "does not bespeak the proletarianization of the CPSU".⁸⁹

The main assumption that these two Sovietologists have in their analysis is common: "working-class" or

87 Unger, n. 70, p. 313.

88 Ibid. Though Rigby disagrees with Unger's estimate about educated in the party, he does not give reasons for this. See T.H. Rigby, "Soviet Communist Party Membership under Brezhnev: A Rejoinder", Soviet Studies, vol. 29, no. 3, July 1977, p. 453.

89 Unger, n. 70, p. 313.

"proletariat" is taken as equivalent to manual labour without education or at the most with little education. This is a fundamental conceptual error which is however inevitable and stems from their broader framework of analysis and the methodology used.

According to the framework of this study as also in the Marxist system of analysis, the category of workers or proletariat includes but is far broader than the category of manual workers. Further, in a socialist society the quality of labour of the working class in general reaches at advanced level without depriving it from being the working class. Especially since the SR reached higher stage in the Brezhnev period, the economic and social changes in Soviet society, in terms of class structure, have become more intense and wide-ranging. The qualitative and quantitative growth of working class, considerable reduction in the number of collective farmers, relatively more number of specialists and white collar employees in the rank of the working class - in sum, the growing homogeneity of Soviet society has already been discussed in the preceding chapter.

The main factors behind the growth pattern of party membership during 1966-75 should therefore be searched into this phenomenon, having been reflected in the further development of the social composition of the party. For instance, the most important development in the ranks of

the CPSU, as in Soviet society, associated with the STR has been a tremendous growth in the number of professional and paraprofessional specialists which cuts across different classes and strata and is present in all of them.⁹⁰

The dynamics of social structure taking place under the STR and partly reflected in the upward mobility of persons from one class or strata to another above it has generated among the Western Sovietologists speculations regarding the social composition of the CPSU. Thus, for instance, while discussing occupations of the CPSU recruits during 1962-75, Unger points out that the bulk of as many as about 1.8 million specialists, i.e. those with secondary education only, in the party were in the later Soviet figures listed as workers.⁹¹ Rigby thinks the figures for specialists may be still higher but not accounted for in the Soviet statistics. Dwelling upon the reason for it he cites the factor, much stressed by the Soviet writers: "a substantial and increasing number of young industrial workers now have secondary technical training, and this is a major target group for recruitment".⁹² Far more significant factor, according to Rigby, is the upgrading of

90 See Table IV.10.

91 Unger, n. 70, p. 312.

92 Rigby, n. 88, p. 452.

qualifications of the persons already in the party. Thus, a 10 per cent sample survey encompassing three raions of Leningrad indicated that 30 per cent of the workers joining the party in 1965 had passed out of manual jobs by 1970 and 51 per cent of these cases were related to improved educational qualifications.⁹³

Indeed, upward mobility in skills, occupations or educational levels of the members after their admission into the party is not reflected in the party statistics (based as they are on the qualifications at the time of admission); and to that extent, the quality of membership in the party at any given time is rather on lower side, but actually higher.

Be that as it may, these evidences only confirm the hypotheses put forward in this study. And so do the data and trends regarding the party membership in 1976-80.

Thus, the growth rate of party membership over five-year period during 1976-81 was 11.5 per cent, compared to 8.8 per cent in 1971-76. Then, party saturation rate among adult population (aged 20 and above) has been growing consistently over the last 25 years. Although it remained the same at 9.4 per cent in 1971 and 1976, it rose to 9.7 per cent in 1981.⁹⁴

93 Ibid.

94 John H. Miller, "The Communist Party: Trends and Problems", in Archie Brown and Michael Brown, eds., Soviet Policy for the 1980s (London, 1982), pp. 6-7.

In terms of levels of education among party members, the available figures show that the basic picture outlined earlier of the "increasing dominance of the party, and especially entrants to the party, by the highly qualified still stands".⁹⁵ The admittance of 'tertiary' graduates into the party has been at a rate commensurate with their output in the society, and far exceeding overall party growth rates. Thus, graduates increased from 21.7 per cent in 1973 to 25.1 per^{cent} in 1977 and to 28.0 per cent of the party by 1981. Similarly, holders of the "secondary specialist qualifications" grew in the party from 22.6 per cent in 1973 to 24.6 in 1977 and to 25 per cent by 1981.⁹⁶

On the other hand, the proportion of those with primary, incomplete secondary or secondary general education in the party came down sharply from 48.1 per cent in 1977 to 44.8 by 1981.⁹⁷ Separate figures of course could show the individual trends in this category of educated. But going by earlier trends, the reduction would have been primarily in the group with primary education, not because of any discrimination as such against it but due to the growing level of education in the society.

95 Ibid., p. 9.

96 Ibid., pp. 8-9.

97 Ibid.

Coming to social composition of the party, the earlier trends appear not only to have been maintained but to have been accelerated as well. The percentage of workers among new recruits in 1976-81 increased to 59 from 57.6 in 1971-75. Expectedly too, the proportion of collective farmers came down to 10 per cent in 1976-81 as against 11.3 per cent in 1971-75. Separate figures for other strata are not available. However, the combined proportion of specialists and others declined marginally. An identical but broader picture is possible through the social composition of the party as it stood in the beginning of 1981. Thus, the proportion of workers grew to 43.4 per cent in 1981 compared to 41.6 per cent in 1976. Collective farmers' share declined from 13.9 per cent in 1976 to 12.8 per cent in 1981. Employees and other made up 44.5 per cent of the party in 1981 as against 44.8 per cent in 1976.⁹⁸ The declining proportion of the last two categories, however, is observed consistently in the last two decades or so and does not warrant any new explanations. For instance, the proportion of collective farmers have been constantly declining in the party as also in the population.

It is obvious from the above study that the growth of the CPSU membership and social composition in the long-

98 See Table IV.4.

term perspective have never been unilinear. Yet, certain regular and significant features have marked them in the recent years. These are however in consonance with the broader socio-economic and political developments in the society.

A point generally noted by many Sovietologists is higher standards for admission into the party over the recent years and decades. This shows relatively higher attributes individuals in the society have acquired. This is especially true in the sense of political consciousness and potential political activities. But then educational and cultural standards in the Soviet society are rising constantly and wider circles of citizens now-a-days may fulfil the prescribed qualifications for admission to the party. The natural tendency, if other things being equal, should be the party's propensity to expand. And, indeed it has, with over 17 million members by 1981 (amounting to 9.7 per cent of the adult population).

The party must however protect its "vanguard" role in the society. Does the admittance or rather predominance of skilled, white-collar or highly educated persons threaten this role? Should not vanguard role be confined to the 'manual' and 'less educated' workers? This is the perceived 'dilemma of growth' almost all Sovietologists in the West seem to pose in regard to the

expansion of the party. They posed it earlier too. As noted earlier, such questions are either conceptually wrong, or out of the framework within which the Soviet system functions. But most important, such questions do not try to relate the socio-economic structural changes, largely under the STR, taking place in the Soviet society with the consequent political changes.

The questions that these Sovietologists pose today perhaps many of them would not pose if it were a "Communist society" strictly in Marxist-Leninist terms. That it is not, perhaps everybody would agree. But the Soviet Union is also not today, or in recent years, exactly what it was, say 20 or 25 years earlier. It does claim with enough reasons to have been a "developed socialist" state in these years. Assumptions and analysis must change with time and new facts. The CPSU membership and social composition cannot be an exception.

Party Network

The very notion of institution implies membership, formal or informal, large or small. But it also implies certain structures. So far the discussion of the CPSU was centred primarily on, though an integral part, its membership, i.e. as a "collection of individuals". But the party as an

institution also has a complex set of structures, offices, committees and personnel through which it performs its functions and regulates relationships among its members and relates with others.

The structural arrangement of the CPSU is that of a power pyramid in which the various units with only exception to the lowest, correspond to the main territorial units of the Soviet system and in which a party organisation serving a given area is regarded as superior to any party organisation which serves only part of that area. The broad base of the pyramid is made up of the primary party organisations which are based not on territorial units but on units of economic or occupational activity, i.e., the factory, collective or state farm, units of the armed forces, offices, educational establishments etc. Above the primary party organisations, the structure rises with diminishing tiers of the party organisations to raion (district), gorod (town), okrug (circuit), oblast (region), krai (area), Union republic and culminating in the Central All-Union Party organs at the apex of the pyramid.⁹⁹ Below the

99 Robert Conquest, ed., The Soviet Political System (London, 1968), p. 105. The gorod (town) unit is a special category. Although lower in rank than oblast, some of the gorod party units are much more powerful due to the size and importance of their towns. Moscow and Leningrad are the most obvious examples of this kind. See Dev Murarka, The Soviet Union (London, 1971), p. 149.

All-Union Party units and above the primary party organisations, the party units are known as local party organs.

Since primary party organisations constitute the lowest and broadest units and since their bodies ^{meet} more frequently compared with those of Republic party level or of All-Union party levels, it is here that the mass of the party members participate in decision-making process. Still, another more significant fact about the primary party organisation from a decision-making point of view is that it has been located not in a 'precinct' or other territorial unit but in the members' place of work.¹⁰⁰ The primary party organisation is formed in any enterprise or institution and at any places of work where there are not less than three party members. All Communists are enrolled in the organisation and are subject to its discipline, even to the extent of needing its approval before changing employment.¹⁰¹

The representative and the highest leading organ for the primary party organisation is the general party meeting which must meet at least once a month. It decides upon all activities. Thus after a person willing to join the party has been recommended by three party members who have been in the party for at least five years and have

100 Hough and Fainsod, n. 4, p. 355.

101 Ibid.

known the applicant for at least one year, his application must be approved by the primary party organisation with a two-thirds majority before it goes for endorsement by the next higher party organ.¹⁰² A new development 'in the past decade or so' should be noted in this context. During the 'assessment' stage at the primary party organisation level members do take part. But it has been repeatedly stressed in the recent years that the preference should be to hold the 'assessment' at open party meetings attended by non-members.¹⁰³ This is due to the importance attached to a person being taken into the party. The new method assumes to help know the wide opinion about the candidate. This process is significant for two reasons: first, it shows the maturity and 'non-elite' nature of the party and, second, the political involvement through the CPSU's primary party organisations of a larger number than the institution itself has.

Its other activities are: ideological training of members, mobilisation of employees to fulfil the enterprise's major tasks, carrying agitation and propaganda

102 Before the changes stipulated by the 23rd Party Congress, the membership period for the recommending party members was three years and the maximum vote for approval by the primary party organisation was a simple majority. See "Department of Party Organizational Work : The CPSU in Figures", n. 51, p. 10.

103 Hill and Frank, n. 22, p. 22.

among employees, waging the struggle against bureaucratism, localism, mismanagement and violations of discipline.¹⁰⁴ However, from a decision-making point of view, the most important responsibility and function of the primary party organisation is the pravo kontrolia (right of supervision) assigned to most of the organisations except those located in administrative agencies, cultural institutions or army units.¹⁰⁵

Given the different types of unit in which they are placed — from mines and triple shift industrial plants, to offices, construction sites, ships at sea, embassies abroad and even symphony orchestra — the internal structure of primary party organisations varies enormously. Its precise nature depends on two factors: the number of party members and the internal organisation of the enterprise itself. For instance, all the primary party organisations elect a secretary and deputy secretary to lead the organisation. However, as the organisation increases in size, the complexity of its structure too grows. Thus, organisations with at least fifteen members elect an executive bureau of three to nine members between meetings of organisation as a whole; those with over three

104 Rigby, n. 62, pp. 14-15.

105 Hougà and Fainsod, n. 4, pp. 356-7.

hundreds can have a party committee of ranging from eleven to fifteen party members instead of a party bureau; those with over a thousand members can have a widened committee of approximately fifty members with an inner bureau.¹⁰⁶

If the primary party organisation has over fifty party members or candidate-members, sub-organisations can be created in the departments, sections, shops, livestock farms, and brigades, with the permission of raikom or gorkom party organisation. Within these, as within primary party organisations with under fifty party members or candidates, party group may be formed in the brigades or units of the establishment. In those organisations with party committees, the "shop party organisations", as they are generally called, have themselves been granted the powers of a primary party organisation. Moreover, below the level of the shop - or in organisations too small for shop organisations - party groups can be created.¹⁰⁷

If the unit where the primary party organisation is located has a large workforce with various grades of workers having uneven distribution of party members among them, it will be organised in a way to take this factor

106 Ibid., p. 356; Hill and Frank, n. 22, p. 49.

107 Hough and Fainsod, n. 4, p. 356.

into account: party groups may be created on the pattern of the sub-units of the enterprise in question and to be coordinated by a bureau.¹⁰⁸ The primary party organisation of a huge plant or establishment will thus have a complicated network of such units. The Ural Machinery Works in Sverdlovsk, for instance, with 6,500 members in the early 1970s, had 112 party organisations in the shops, departments and so forth, and a total of 360 party groups. Moscow University, with over 7,000 party members, had 153 shop organisations and 461 party groups. What is notable in this context is that such complex networks reflect the growing sophistication of the Soviet economy and social structure under the STR and the greater involvement of the party among the workforce.¹⁰⁹

Minor variations in the formal structure notwithstanding, all the primary party organisations with their wide networks provide the institutional framework in which a great many middle and lower level personnel can

108 Hill and Frank, n. 22, pp. 49-50.

109 Hough and Fainsod, n. 4, p. 356. In fact, due to the complexity in social and economic organisations, the search for the appropriate forms of primary party organisation is continuing and "experiments, conferences, articles and books that discuss the question have become a common feature of party experience in the past few years". See Hill and Frank, n. 22, pp. 52-53.

participate in decision-making process on a part-time basis. This process stems from the fact that every party member is required to "work in one of the party organisations" and that these organisations perform, among other things, important supervisory responsibilities within the institutions in which they are located. Since the primary party organisations make up the broad base of the party and perform control functions, the party member being required to take on a "party assignment" is virtually forced to participate in some type of activity relevant to decision-making process.¹¹⁰

The channels through which the members participate in decision-making in primary party organisations are varied.

First of all, since primary party organisations with less than 150 members (in 1977 only 6.6 per cent of the primary party organisations had over 100 members) have the secretaryship normally on part-time basis, with the secretary simultaneously holding a full-time job in an enterprise or in an institution; since except for one or more of the deputy secretaries in the very large organisations and perhaps the secretaries of a few of the largest shop organisations, all other primary party work is part-time in nature, large number of people with

110 Hough and Fainsod, n. 4, p. 355.

different occupations are involved in the party work as secretaries, deputy secretaries and members of party committees or bureaus of primary party organisations and as party group organisers. In 1977, party members working as secretaries, deputy secretaries and members of party committees or bureaus of shop organisations numbered 1,913,000. In the same year, there were nearly 560,000 party group organisers.¹¹¹

Secondly, the primary party organisations provide to even the rank-and-file party member with a greater potential impact on decisions than a person outside the party.¹¹² The requirement of a "party assignment" puts a party member in a position to affect conditions at the place of work and/or to transmit complaints and suggestions to higher officials. If he is not elected to a party work, then he must work in the trade union or Komsomol organisations, in self-administration institutions (for example, the comrade courts) or in agitation-propaganda activities. "Even agitation propaganda work exposes a party member to questions which 'concern the most diverse

¹¹¹ Ibid., pp. 357-8, 360.

¹¹² A sociological study in Siberian industrial plants found party members spending 10.2 per cent of their "free" time on "public affairs" compared with 3.1 per cent for non-party persons. Hough observes, "this distinction must be correlated with (political) impact. See *ibid.*, p. 360.

spheres of life of society: politics, economics, production and living conditions (why is something permitted? Why isn't such and such done?)¹¹³ Reporting the causes of dissatisfaction to the party committee is a component part of properly functioning 'party information',¹¹³ and provide the agitation-propagandists with ample opportunity for putting inputs into decision-making.¹¹⁴

Needless to say that general meetings of the primary party organisations, particularly because they are held so frequently (at least once in a month), provide another forum in the organisation by which the rank-and-file participate in decision-making.

Need of better management of intricate problems with the SR,¹¹⁵ the overall changes in social structure of

113 Ibid.

114 The CPSU has recruited many of its members and other activists to serve as part-time propagandists and agitators and to spread its message through talks and face-to-face to individuals and small group sessions. In 1975, there were 3.7 million agitators. See *ibid.*, p. 297.

115 Dwelling upon the need of party's supervision over managements, Brezhnev observed: "Primary Party Organisations are vested with the right to control the work of managements. It is important that they exercise this right to a larger extent and in the best way possible. Whether it is a matter of personnel, the fulfilment of economic plans, or the improvement of the people's working and living conditions, the party organisations should adopt a principled stand and not take their cue from the management when the latter is wrong. In fact, they should firmly implement the party line." See L.I. Brezhnev, Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union, in The 26th Congress of the CPSU: Documents and Resolutions (Moscow, 1981), p. 92.

Soviet society have necessitated further development of the primary party organisations both in its number and qualitative composition. Thus the total number of primary party organisations by 1956 was 351,249 which grew to 369,695 by 1971, to 389,387 by 1976 and to 414,000 by 1981. The number of shop organisations rose from 76,058 in 1953 to 173,961 by 1961; 352,871 by 1971; 400,388 by 1976; and 457,000 by 1981. That of party groups rose from 122,243 in 1953 to 164,931 by 1961; 443,233 by 1971; 528,894 by 1976; and to 618,000 by the beginning of 1981.¹¹⁶

A marked development took place in 1959 when Commissions were established within the primary party organisation to assist in the supervision of the administration (Komissia po Kontrol'iu delatel' nosti administratsii). The number of such commissions in Ukrainian industrial enterprises increased from 16,000 to 20,000 between 1960 and 1973 and included over 90,000 party members on the latter date.¹¹⁷ In the subsequent period, a number of measures have been taken to improve and enhance the structure of the primary party organisations. The widening of the party committees in the largest organisations to some fifty members permits more people from

¹¹⁶ See Table IV.12.

¹¹⁷ Hough and Fainsof, n. 4, p. 303.

different classes and strata to enter into the organisation's top committees. The reported cases of widened party committees in industry, for example, indicate, a worker component of approximately 50 per cent.¹¹⁸ Further, party committees have been established at railway junctions, and integrated party organisations have been established in production amalgamations, building trusts and wholesale trade agencies.¹¹⁹

The Twenty-Fourth Congress of the CPSU put an end to the separation of primary party organisations into those having the right to monitor the functioning of the places of employment where they existed and those not having this right. The same right of monitoring the activity of the management was extended to the primary party organisations of all development organisations, design offices, research and educational institutions, cultural-enlightenment, health care and other institutions and organisations, "the functions of whose administrations do not extend beyond the confines of their respective work forces".¹²⁰ Party organisations in

118 Ibid., p. 359.

119 L.I. Brezhnev, Report of the CPSU Central Committee to the 24th Congress of the Communist Party of the Soviet Union (Moscow, 1971), p. 114; "Department of Party Organizational Work : The CPSU in Figures", n. 51, p. 26.

120 Ibid.

ministries, state committees and other cultural and local Soviet and business organisations and agencies too were granted the right to monitor the work of their personnel in fulfilling the directives of the party and government and in observance of Soviet laws.¹²¹

The extension of the right to monitor to the primary party organisations in various enterprises, institutions and agencies has resulted primarily in the admission of less 'elite' elements into the decision-making processes of these bodies. Previously, in the higher educational institutions, for example, the rector had been advised by a scholarly council composed of the institute's or university's administrators and leading professors. To a large extent, this council had been a committee of party members but the party organisation as a whole is much 'elite' in nature, containing on the average, 42 per cent of the institution's faculty. Even the party bureau (and the party committee in large institutes) consists not only of full professors and administrators but also of students and junior faculty as well. The party committee or party bureau, unlike the scholarly council, need not wait for the rector to initiate an issue, and, in case of disagreement with the rector, it

121 Ibid.

can take the dispute to the district committee.¹²²

Consequent to such development of the primary party organisations, their importance in Soviet political life has grown considerably. More and more party members participate in their functions. Thus, the 23rd Congress of the CPSU noted that the party meetings were conducted on a high level of political consciousness and that almost 2,300,000 members and candidate members of the party spoke at meetings of primary party organisations. "Most of these speeches were in a clear-cut and business-like manner. The speakers analysed the results and defects in the work and stressed the growing demands they made of leading party bodies and officials."¹²³ Leonid Brezhnev, in his report to the 25th Congress noted that "the reporting and election meetings in the primary party branches were attended by more than 9/4 per cent of the Communists, with one in four of those attending taking part in the debate" with "a high level of criticism and self-criticism".¹²⁴ This point must be emphasized since the free and business-like discussion of the party's policy and practical work is an important principle of inner-party democracy and without which, among

122 Hough, n. 12, p. 9.

123 Brezhnev, n. 66, p. 119.

124 L.I. Brezhnev, Report of CPSU Central Committee to the 25th Party Congress in Twenty-Fifth CPSU Congress: Documents and Resolutions (New Delhi, 1976), p. 66.

other things, correct relations between the party and the working people as a whole cannot be established and without which all-round development and progress of a Socialist State cannot be ensured. If seen in this perspective, it is significant and a positive development that between the 25th and the 26th Congresses, the meetings of primary and shop party organisations and of party groups were attended by 96 per cent of the membership; and that nearly 10,000,000 people took the floor.¹²⁵

125 Brezhnev, n. 115, p. 95.

TABLE IV.1

NUMERICAL COMPOSITION OF THE CPSU : 1917-1976

(Figures as at 1 January, unless otherwise indicated)

Year	Full Members	Candidates	Total
1	2	3	4
1917	24,000	-	24,000
1918 (March)	390,000	-	390,000
1919 (March)	350,000	-	350,000
1920 (March)	611,978	-	611,978
1921 (March)	732,521	-	732,521
1922	410,430	117,924	528,354
1924	350,000	122,000	472,000
1925	440,365	361,439	801,804
1926	639,652	440,162	1,079,814
1927	786,288	426,217	1,212,505
1928	914,307	391,547	1,305,854
1929	1,090,508	444,854	1,535,362
1930	1,184,651	493,259	1,677,910
1931	1,369,406	842,819	2,212,225
1932	1,769,773	1,347,477	3,117,250
1933	2,203,951	1,351,387	3,555,338

Table IV.1 contd.

1	2	3	4
1934	1,826,756	874,252	2,701,008
1935	1,659,104	699,610	2,076,842
1936	1,489,907	586,935	2,076,842
1937	1,453,828	527,869	1,981,697
1938	1,405,879	514,123	1,920,002
1939	1,514,181	792,792	2,306,973
1940	1,982,743	1,417,232	3,399,975
1941	2,490,479	1,381,986	3,872,465
1942	2,155,336	908,540	3,063,876
1943	2,451,511	1,403,190	3,854,701
1944	3,126,627	1,791,934	4,918,561
1945	3,965,530	1,794,839	5,760,369
1946	4,127,689	1,383,173	5,510,862
1947	4,774,886	1,277,015	6,051,901
1948	5,181,199	1,209,082	6,390,281
1949	5,334,811	1,017,761	6,352,572
1950	5,510,787	829,396	6,340,183
1951	5,658,577	804,398	6,462,975
1952	5,853,200	854,339	6,707,539
1953	6,067,027	830,197	6,897,224
1954	6,402,284	462,579	6,864,863

1	2	3	4
1955	6,610,238	346,867	6,957,105
1956	6,767,644	405,877	7,173,521
1957	7,001,114	493,459	7,494,573
1958	7,296,559	546,637	7,843,196
1959	7,622,356	616,775	8,239,131
1960	8,017,249	691,418	8,708,667
1961	8,472,396	803,430	9,275,826
1962	9,051,934	839,134	9,891,068
1963	9,581,149	806,047	10,387,196
1964	10,182,916	839,453	11,022,369
1965	10,811,443	946,726	11,758,169
1966	11,548,287	809,021	12,357,308
1967	12,135,103	549,030	12,684,133
1968	12,484,836	695,389	13,180,225
1969	12,958,303	681,588	13,639,891
1970	13,395,253	616,531	14,011,784
1971	13,745,980	626,583	14,372,563
1972	14,109,432	521,857	14,631,289
1973	14,330,525	490,506	14,821,031

1	2	3	4
1974	14,493,524	532,391	15,025,915
1975 ¹			15,295,000
1976			15,638,891
1981			17,430,413

1 "Possibly later than 1 January. The source for the 1975 figure which states that the membership was 'now' 15,295,000 was sent to the press on 18 March 1975". T. H. Rigby, "Soviet Communist Party Membership under Brezhnev", Soviet Studies, vol. 28, no. 3, July 1976, p. 322.

Sources: Rigby, *ibid*; T.H. Rigby, Communist Party Membership in the USSR, 1917-1967 (Princeton, 1968), pp. 52-53; "Development of Party Organizational Work: The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, p. 6; "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, Winter 1976-77, p. 7; John H. Miller, "The Communist Party, Trends and Problems", in Archie Brown and Michael Kaser, ed., Soviet Policy for the 1980s (London, 1982), p. 6.

TABLE IV.2
DECLINE IN THE NUMBER OF INTAKES INTO THE CPSU- 1965-1975

Year (as at January 1)	Members	Candidates	Total	Increase in preceding year
1965	10,811,443	946,726	11,758,169	735,800
1966	11,548,287	809,021	12,357,308	599,139
1967	12,135,103	549,030	12,684,133	326,825
1968	12,484,836	695,389	13,180,225	496,092
1969	12,958,303	681,588	13,639,891	459,566
1970	13,395,253	616,531	14,011,784	372,883
1971	13,745,980	626,583	14,372,563	361,779
1972	14,109,432	521,857	14,631,289	258,726
1973	14,330,525	490,506	14,821,031	189,742
1974	14,493,524	532,391	15,025,915	204,884
1975 ^a			15,295,000	269,000
1976 ^b			15,638,891	343,891

a The figure for 1975 is possibly of later than 1 January; it was sent to the press on 18 March 1975. See T.H. Rigby, "Soviet Communist Party Membership under Brezhnev", Soviet Studies, vol. 28, no. 3, July 1976, p. 322.

b The figure for 1976 is as of January 1. As the figure for 1975 is of different date, some error is possible.

Source: T.H. Rigby, "Soviet Communist Party Membership under Brezhnev", Soviet Studies, vol. 28, no. 3, July 1976, p. 322; "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, Winter 1976-77, p. 74

TABLE IV.3

CPSU GROWTH AND SATURATION OF USSR ADULT
POPULATION : 1956-1981

Year	Party Members and Candidates	Growth over Five-Year Period	Percentage of Adults (aged 20 and above) in party
1956	7,173,521	-	5.7
1961	9,275,826	+29.3	6.9
1966	12,357,308	33.2	8.6
1971	14,372,563	16.3	9.4
1976	15,638,891	8.8	9.4
1981	17,430,413	11.5	9.7

Sources: John H. Miller, "The Communist Party, Trends and Problems", in Archie Brown and Michael Kaser, ed., Soviet Policy for the 1980s (London, 1982), p. 6.

TABLE IV.4

SOCIAL COMPOSITION OF THE CPSU : 1956-1981

	1956	1961	1971	1981
Total Communists	100	100	100	100
including				
Workers	32.0	34.5	40.1	41.6
Collective farmers	17.1	17.5	15.1	13.9
Employees and all others	50.9	48.0	44.8	44.5

Source: "The CPSU in Figures (1956-1961)", Soviet Law and Government, vol. 1, no. 2, Fall 1962, p. 5; "The CPSU in Figures", The Soviet Review (New York), vol. 18, no. 1, Spring 1977, p. 6; L.I. Brezhnev, Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union, in The 26th Congress of the CPSU : Documents and Resolutions (Moscow, 1981), p. 88.

TABLE IV.5

EDUCATIONAL COMPOSITION OF THE CPSU
(In Percentage)

Year	Higher	Incomplete Higher	Secondary	Incomplete Secondary	Primary	No Primary
1956	11.2	3.6	22.2	29.6	28.4	5.0
1961	13.2	3.0	26.2	28.6	25.8	3.2
1966	15.7	2.5	30.9	27.5	23.4	-
1971	19.6	2.4	34.3	24.9	18.8	-
1971 (January 1)	24.3	2.5	38.5	20.3	14.4	-

Sources: "Development of Party Organisational Work : The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, p. 17; "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, Winter 1976-77, p. 8.

TABLE IV.6

OCCUPATIONAL COMPOSITION OF THE CPSU RECRUITS :
1955-1960

	1955	1960
Total accepted as party candidates	100	100
Including		
Workers	30.4	43.1
Collective Farmers	21.3	21.7
Employees	46.2	34.3
including		
Engineering and Technical Personnel and other Specialists	53.6	68.5
Students and Others	2.1	0.9

Source: "The CPSU in Figures (1956-1961)", Soviet Law and Government, vol. 1, no. 2, Fall 1962, p. 4.

TABLE IV.7

OCCUPATIONAL COMPOSITION OF THE CPSU RECRUITS :
1956-1981
(In Percentage)

	1956-1961	1961-1965	1966-1970	1971- 1975	1976- 1981
Workers	41.1	44.7	52.0	47.6	59
Collective Farmers	22.0	15.0	13.4	11.3	10
Specialists	23.3	22.2	26.4	24.5	
Other White Collar Workers	12.5	11.1	7.5	5.2	-
Students	1.1	1.0	0.7	1.4	-

Sources: "Department of Party Organizational Work : The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, pp. 11-12; Aryen L. Unger, "Soviet Communist Party Membership under Brezhnev : A Comment", Soviet Studies, vol. 29, no. 2, April 1977, p. 312; L.I. Brezhnev, Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union in The 26th Congress of the CPSU : Documents and Resolutions (Moscow, 1981), p. 88.

TABLE IV.8

REPRESENTATION OF PEOPLE ENGAGED IN AGRICULTURE
IN THE CPSU: 1955-1960

	Accepted into Party	
	1955	1960
Agronomists, animal husbandrymen and other farm experts	821	6,597
Tractor operators, combine opera- tors, and other machinery opera- tors	13,578*	31,976
Persons engaged in livestock farming	12,339	28,302
Persons engaged in raising field crops, vegetables and fruits	20,711	32,264

* Includes workers at machine tractor stations.

Sources: "The CPSU in Figures (1956-1961)", Soviet Law
and Government, vol. 1, no. 2, Fall 1962, p. 4.

TABLE IV.9

OCCUPATIONAL COMPOSITION OF THE CPSU : 1956-1961

	January 1, 1956	January 1, 1961
Total number of Communist employees	100	100
including		
Administrative personnel in organisations, institutions, enterprises, construction projects, state farms repair and equipment stations and their organisational subdivisions	14.1	10.2
Engineering and technical personnel, agricultural experts, economists architects	20.1	29.2
Persons in the sciences, education, public health, literature and the arts	18.8	21.5
Persons in trade and public catering	4.7	4.9
Personnel in control, accounting and clerical activities	13.2	11.9
Other employees (communications, urban services, etc.)	29.1	22.3

Source: "The CPSU in Figures (1956-1961)", Soviet Law and Government, vol. 1, no. 2, Fall 1962, p. 6.

TABLE IV. 10

NUMBER OF COMMUNIST PROFESSIONALS AND SEMI-PROFESSIONALS
WITH HIGHER AND SECONDARY SPECIALIZED EDUCATION

Year	Number	As per cent of total membership of CPSU
1927	24,899	2.2
1939	326,947	14.2
1946	1,008,302	18.3
1952	1,602,165	23.9
1956	1,990,176	27.7
1961	2,951,230	31.8
1966	4,397,275	35.6
1971	5,903,751	41.1
1973	6,561,000	44.3
1975	7,614,000	48.7

Source: "Development of Party Organizational Work : The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, p. 18; "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, Winter 1976-77, p. 8.

TABLE IV.11

SPECIALISTS AND PERSONS WITH HIGHER EDUCATION
IN PARTY AND POPULATION, 1966-1976 (Beginning
of the Year)

	1966	1971	1976
A. All party members	12.4 m	14.4 m	15.6 m
B. Specialists with middle and higher education			
1. All specialists employed in economy	12.1 m	16.8 m	22.5 m
2. Communist specialists	4.4 m	5.9 m	7.6 m
3. Party saturation of specialists (per cent)	36.4	35.1	33.8
4. Share of Communist specialists in party(%)	35.6	41.1	48.7
C. Persons with higher education			
1. All persons with higher education	6.0 m	8.8 m	12.0 m
2. Communists with higher education	1.9 m	2.8 m	3.8 m
3. Party saturation of persons with higher education (per cent)	31.7	31.8	31.7
4. Share of Communists with higher education in CPSU (per cent)	15.7	19.6	24.3
D. Share of Communists with higher education among communist specialists(%)	44.0	47.8	50.0

Note: m = millions

Source: Cited from Soviet sources in Aryeh L. Unger, "Soviet Communist Party Membership under Brezhnev: A Comment", Soviet Studies, vol. 29, no. 2, April 1977, p. 311.

TABLE IV.12

STRUCTURE OF PRIMARY PARTY ORGANISATIONS

	1953	1956	1961	1971	1976	1981
Total Number of primary party organi- sations		351,249		369,695	389,387	414,000
of which						
Shop party organisations	76,058		173,961	352,871	400,388	457,000
Party groups	122,243		164,931	443,233	528,894	618,000

Sources: "The CPSU in Figures", Soviet Law and Government, vol. 15, no. 3, winter 1976-77, pp. 12, 13;
 "Department of Organizational Work: The CPSU in Figures", Soviet Law and Government, vol. 13, no. 4, Spring 1975, pp. 27-29; L.I. Brezhnev, Report of the Central Committee of the CPSU to the 26th Congress of the Communist Party of the Soviet Union, in The 26th Congress of the CPSU: Documents and Resolutions (Moscow, 1981), p. 92.

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CHAPTER V

POLITICAL PARTICIPATION : INSTITUTIONAL DEVELOPMENT OF THE SOVIETS

The Communist Party is indeed the "dominant political institution" in the Soviet Union. But it is not the only institutional actor or for that matter even the only effective one. It would seem to be over-simplification and even misleading to assert as many Western scholars and others do, that the government or even other non-party institutions simply function as "administrative agencies" or "transformation belts" merely carrying out the "policy made in the party". This understanding of the decision-making process seemingly concentrated in the party obscures the fact that the categories of "party" and "government" overlap each other in the Soviet Union.¹

As it is, the distinction between policy formation, rule-making and their implementation cannot be sustained in theory or observed in practice. More so in case of the Soviet Union where most of the personnel directly and ultimately responsible for the policy-making are members of both the government and the party. If this be the case, the party as an institution is not the only one with a role

¹ Jerry F. Hough and Merle Fainsod, How the Soviet Union is Governed (Cambridge, Mass., 1979), p. 362.

to play in the policy-process. In other words, even if nearly all policy-making takes place within the party, broadly speaking, or even though the ultimate authority lies with the top party organs, this does not say much about the actual policy-making process in the system. For, as Hough and Fainsod put it,

if the Politburo and the Central Committee are significant in the policy-making process, then so, surely, are those 'administrators' who sit on those committees and so too are the large organizations led by those men. In fact even if the party Secretariat were to have the final say on every important question (and this is most improbable), the executive institutions still would be reservoirs of expertise and centers of specialized interests and they would still be significant participants in the battle for influence over policy. 2

This intricate web of political relations, the blurring of the edges between the party and the state is not confined to the central level. This is equally true in case of the local level.³

It is obvious therefore that the relationship between the CPSU and the institutions of the Soviet State is extremely complex. In more fundamental terms, it appears to be a dynamic relationship varying over time and space,

2 Ibid., p. 363.

3 For detailed arguments and examples, see Ronald J. Hill and Peter Frank, The Soviet Communist Party (London, 1981), pp. 107-8.

from one level of administration or unit to another.⁴ Further, it may be complementary: the party formulates broad policy outlines which are given legal force by the Soviets and implemented by the state administrative organs.⁵

Under such circumstances, the sovereign decision-making body in the Soviet system of government cannot be identified for all purposes with any particular organ of the state or party structure. Or at least "the party dominance of the government cannot be equated with party apparatus dominance of the government".⁶ And if one must make a choice of which of the two, the party or state, is supreme, in the ultimate analysis, it has to be on the side of the latter.

For, what does the *State* represent? It represents societal power, public power, that is, its capacity to extend its "exercise of will" to all members of society, to influence all the most important spheres of public life. It serves as the most powerful device for organising society, managing it and regulating the social conduct of its members. This power may seem to be enforced by measures of both, persuasion

4 Ibid., p. 104.

5 Ibid., p. 107.

6 Hough and Fainsod, n. 1, p. 450.

and compulsion. But of them, compulsion is the principal guarantor that the will of the authority will prevail.⁷

However, public power of the above nature but of the type corresponding to particular socio-economic systems has existed in all the principal historical periods in the development of human society. Thus, as a means of leadership, method/administration and regulation of the most important social processes, public power existed in pre-class, class society, and will exist under communism.⁸

What differentiates public power of the state from the public power under pre-class, class or communist society is the former's existence in or association with class society which makes it "a distinct power" (as Engels called it) namely, political power, the dominant force of a class ruling in society. Its presence is a precondition for a particular class to establish itself as dominant. To this effect, the state power is organised in a distinct fashion. It is not only internally co-ordinated structurally but also has specially established organs, a machinery in order to implement itself.⁹ As Marx wrote, "The existence of state power finds its expression specifically in its officials."

7 V.S. Shevtsov, "On the Notion of 'Political Power' under the Conditions of Socialism", The Soviet Review (New York), vol. 23, no. 1, Spring 1932, p. 4.

8 Ibid., pp. 5-6.

9 Ibid., pp. 4, 6.

the army, administration, courts. If one disregards this physical embodiment, it is merely a ghost, something imagined, no more than a name."¹⁰

Obviously the essence of the state - to be the decisive means of implementing the will of the ruling class - requires that state, political power be the one (from the viewpoint of social content and its object) and only public power in a class society. The most significant properties of the state power is thus the quality of its being, above all, political but simultaneously public, i.e. universality in a society, and sovereign. In order to be so, in addition to the physical instruments of rule, the state power also establishes the legal status of government agencies and social organisations, the range of rights and duties of officials and citizens.¹¹

What is its position in a socialist society? Such a society is also a class society where the working class is the dominant class. To that extent, it controls and utilises the state to make and keep its dominant position in the society. However, given the non-exploitative nature of the class, with the development of socialism and the development of social structures, some of the essence of the state (from the viewpoint of social content and its

10 Cited in *ibid.*, p. 6.

11 *Ibid.*, pp. 6-7.

objects) changes. Under a developed socialist society, like the Soviet Union, for instance, all the classes and strata become the positive objects of the state power. For, there is no antagonistic contradiction between them and the working class. Changes also come in the forms and methods by which the state power is exercised. "Compulsion" as a factor of the state power acquires a different significance and different forms and methods of implementation of the will of the state authority. In the process of its "development and perfection along the road of gradual transformation into a stateless, nonpolitical system of self-administration of society" this is inevitable.¹²

Even with these developments in a socialist or developed socialist society, the basic criteria and features of state power inherent in it - i.e. public power, sovereignty, a particular machinery, and measures of compulsion - remain so long as political power exists.¹³ The state power remains the only political power. The inevitable and desirable development of various social and political organisations and institutions do not minimise or rob the state of its existence as the only, indivisible political power that is public and sovereign.

This being so, a high degree of social homogeneity and unity in a developed socialist society, the consequent

¹² Ibid., p. 7.

¹³ Ibid., pp. 7-9.

drawing together of state and socio-political forms and institutions may unquestionably introduce a certain distinctiveness in the functioning of the state power, but not to its inherent properties so long as it exists.¹⁴

It is for these reasons that the Soviet state remains the only political power under which the Soviet society is run. This makes the fundamental distinction between the state and the CPSU. The latter may be a component, or indeed the nucleus, the core of the Soviet political system - comprising both state and non-state socio-political institutions - but it is not the state power.

As it is, various institutions and organisations constituting the political system of the Soviet Union have a direct relationship to the determination of state policy, the shaping of state organs, and the exercise of state functions. This is due to the common interests and goals the state and the socio-political organisations share.^a For instance, the Party and other organisations are granted, among other things, the right to nominate candidates for deputy of the Soviets of people's deputies. And these organisations on their part, for example, create political and legal consciousness among the people to observe state laws. Thus the mutual relationships are based on comprehensive and coordinated cooperation in solving both overall state and distinctively social tasks.¹⁵

14 Ibid., p. 9.

15 Ibid., pp. 10-11.

Unlike other organisations, the CPSU's nucleus position, its character of the "leading and guiding force" in the Soviet political system stems from the fact that "its policy, expressing the fundamental interests of the working class and all the toiling masses governs the goals and content of the activities of the agencies of state power".¹⁶

Given this perspective, the provisions of the 1977 Constitution in this respect is understandable. According to it, the CPSU is the "leading and guiding force of Soviet society and the nucleus of its political system, of all state organisations and public organisations" but all "party organisations shall function within the framework of the Constitution of the USSR".¹⁷ And this framework vests all (state) power in the U.S.R with the people who exercise it "through Soviets of People's Deputies, which constitute the political foundation of the USSR".¹⁸

The Soviets thus constitute the most basic significant unit among the state institutions, and an important unit in the political organisations of Soviet society. Compared to the CPSU of which membership is, after all, not all-pervasive and based on a complex set of criteria, for many the Soviets are the most accessible political

16 Ibid., p. 10.

17 Article 6, Constitution of the USSR in Legislative Acts of the USSR, 1977-79 (Moscow, 1981), Book 1, p. 29.

18 Article 2, *ibid.*

institution to participate in decision-making process. They combine the features of a government body and a mass organisation of the people. They operate like social organisations, with the masses participating extensively and directly in their work.¹⁹ They have the last word in the adoption of legislative acts, approval of state plans and budgets and in the elaboration of various measures aimed at their realisation.²⁰

Development of the Soviets may be seen as a part of the all-round extension and perfection of socialist democracy, active participation of all citizens in the administration of the state and public affairs, in the management of economic and cultural development, improvement of the government apparatus and increased control over its activity by the people. In specific terms, the unprecedented growth of the productive forces under the impetus of the SIR calls for new forms and methods of organisation and management. It requires improvement and reorganisation of existing forms and the elaboration of new democratic forms and methods of people's participation in government and economic management. More specifically, it

19 B. Topornin and E. Machulsky, Socialism and Democracy: A Reply to Opportunists (Moscow, 1974), pp. 201-2.

20 Ibid., p. 110.

requires "continuous improvement of the whole system of state guidance of society. This refers both to the organization of the state machinery itself - its structure and the system of relations between state bodies, and to its methods of administration and the representative bodies of state power, which for the most part decide questions of administrative policy, and also local management bodies".²¹

The scientific and technological progress under the SR also provides opportunities for the development of the representative bodies in the socialist system. The further development of general cultural and political standards of the masses enables them to deal more knowledgeably with management, administration and social matters and combine their experience with achievements in the theory and practice of government.²² The content, forms and methods of socialist democracy including the representative bodies, i.e. of the Soviets, on their part must "correspond to the increased scale and complexity of the processes of social management, to the growth of self-awareness and social activity among working people, to changes in the class structure of the population, to the heightened importance of science in the management of

21 E. Chekharin, The Soviet Political System under Developed Socialism (Moscow, 1977), p. 107.

22 Topornin and Machulsky, n. 19, p. 9.

society and to the expanding of computerisation in information-collection and processing and in administrative decision-making²³. For it is only in a democracy, in the real genuinely socialist sense with active citizen participation at a higher level, that it is possible to make a sufficiently full and all-round assessment of social interests and needs.

It is obvious that the role and place of the representative bodies are determined not only by the tasks assigned to them but also by the procedure whereby they are formed, by their organisational set-up, by their social composition, by their legal powers and by the nature of their activities. It is in this perspective that the development of the Soviets under the STR in the Soviet Union is sought to be explained.

A chief characteristic of bourgeois democracy is to counterpose the authority of the central government to that of local government. Contrary to this, the Supreme Soviet of the USSR, the Supreme Soviets of the union and autonomous republics and the territorial, regional, district, city, village and settlement Soviets of working peoples constitute an integral part of the indivisible system of popular representation. The principle of democratic centralism ties the system of Soviets into a single whole

23 Ibid., p. 189.

and combines the centralised planned guidance with a broad scope for initiative and activity on the part of the local Soviets. As a result, under the conditions of the STR, development has taken place at all levels of the Soviet system. Important measures aimed at strengthening and improving the activity of the Soviets from top to bottom have been taken at the initiative of the Communist Party of the Soviet Union. Consequently, the role of the Soviets has been enhanced, the activity of the masses stimulated and their participation in the democratic administration of the state and all its organisational-economic operations extended.²⁴

The programme of the CPSU adopted at 22nd Congress of the CPSU in 1961 noted the necessity of perfection of the forms of popular representation and promotion of the democratic principles of the Soviet electoral system. It emphasised the widest and fullest discussion of the personal qualities and suitability of the candidates at meetings and in the press to ensure the election of "the worthiest and most authoritative of them".²⁵

In order to improve the work of Soviets and bring fresh forces into them, the programme advised that at least

24 V.M. Chkhikvadze, ed., The Soviet State and Law (Moscow, 1969), pp. 164-5.

25 Programme of the Communist Party of the Soviet Union in The Road to Communism: Documents of the 22nd Congress of the Communist Party of the Soviet Union (Moscow, 1962), pp. 548-9.

one-third of the total number of deputies to a Soviet should be elected anew each time. In order to bring a wide range of able persons into the leading bodies of the Soviets and rule out abuses of authority by individual government officials, systematic renewal of these bodies was urged. To this effect the principle that the leading officials of the Union, republican and local bodies should be elected to their offices, as a rule, for not more than three consecutive terms was adopted. In exceptional cases, when the personal gifts of the officials in question would contribute to the further activity of such leading bodies, his re-election would be valid if not a simple majority but three-quarters or more of the votes are cast in his favour.²⁶

The programme further noted the need of the regular accountability of Soviets and deputies to their constituents and the right of the electorate to recall ahead of term deputies not performing their work efficiently; of publicity and free and full discussion of all important questions of government, and of economic and cultural development at the meetings of Soviets; of regular accountability of executive government bodies to meetings of Soviets - from top to bottom; of checking the work of these bodies and control over their activity; of systematic discussion by the Soviets of questions raised by deputies; of criticism of

²⁶ Ibid., p. 549.

shortcomings in the work of government, economic and other organisations.²⁷

It further urged that every deputy to a Soviet must take an active part in the governmental affairs and carry on definite work. To this effect it urged for the enhancement of the role of the standing committees of the Soviets. The standing committees of the Supreme Soviets must systematically control the activities of ministries, departments and economic councils and actively contribute to the implementation of the decisions adopted by respective Supreme Soviets. To improve the work of the legislative bodies and increase control over the executive bodies deputies should be periodically released from their regular employment for committee work. In case of local Soviets, an increasing number of questions falling under the jurisdiction of the departments and sections of executive bodies must be gradually referred to the standing committees of the local Soviets for decision. The rights of local Soviets of working people's deputies should be extended so that they make final decisions on all questions of local significance.²⁸

The twenty-third Congress of the CPSU further reinforced demands of the Soviets. To facilitate their

27 Ibid.

28 Ibid., pp. 549-50.

function the party stated that "Party bodies must completely eliminate their petty tutelage of the Government bodies and the practice of overriding them, which begets irresponsibility and inertness on the part of the officials. It is the duty of party organisations to develop the activity of the Soviets in everyway, support their initiative...."²⁹ It outlined the principal directions to be followed in solving the task of enhancing the role of the Supreme Soviets. The most important of them included the further development in the activity of the standing committees, in the work of the Supreme Soviets, and the agencies of state administration, and the activization of deputies.³⁰

Since mass political participation mainly takes place at the lower levels of political institutions, my main concentration in the study of the growth of Soviets would be on local Soviets. There are other reasons as well. Frequency of meetings of the Soviets and their derivative bodies at lower levels are more in number and the functions are more obvious. There has also been a trend in recent years to strengthen the local Soviets which in the ultimate analysis are the most close to the working people.

29 L.I. Brezhnev, Report of Central Committee of the Communist Party of the Soviet Union to the 23rd Congress of the CPSU in 23rd Congress of the Communist Party of the Soviet Union (Moscow, 1966), p. 130.

30 L.T. Krivenko, "The Standing Committees and the Ministries", Soviet Law and Government (New York), vol. 9, no. 3, Winter 1970-71, p. 240.

From the early 'sixties onwards, the powers and functions of the Soviets have been more and more delineated and increased. This process began with a decree of the CPSU Central Committee 'On Improving the Work of the Soviets of Working People's Deputies and Strengthening Their Ties with the Masses' adopted on 22 January 1957. Though the decree conferred certain exclusive powers on the local Soviets in order to strengthen their authority as organs of popular representation, these remained narrow and vaguely expressed.³¹ However, with the development of productive forces and of social structure under the STR, a new situation emerged; the enormous volume of work associated with management and its complexity under the STR and the growing education, consciousness of the people demanded increasing popular participation to regulate social, economic and political life. Consequently, a discussion ensued with regard to the problem of the jurisdiction of the Soviets in the periodical press, in the specialised literature, and at scientific conferences and symposia. It was pointed out that there was an integral connection between the question of the jurisdiction of organs of authority and the more general problem of their role in the system of socialist democracy and in the solution of the tasks of building communism. Since a rise in the role of the

31 N.G. Starovoltov, "The Exclusive Powers of Territorial and Regional Soviets", Soviet Law and Government, vol. 16, no. 3, Winter 1977-78, p. 30.

Soviets as the representative organs of the people and recognition of their overriding authority were unthinkable if they did not directly solve the principal questions within their areas of jurisdiction; since effective influence by the Soviets upon economic and socio-cultural development and upon the work of administrative agencies, enterprises, institutions and organisations within the territory of the Soviets could be assured only if these sessions could become more than perfunctory, it was necessary to endow the local Soviets with exclusive powers.³²

The Soviets implement their authority in all fields in a variety of juridical and organizational forms. They possess two kinds of authority: some of these powers are exercised by Soviets directly at their sessions, while others are under the combined purview of the Soviets and their derivative bodies, i.e., the executive committees they set up, their departments, administrations, standing committees and the deputies.³³

The exclusive powers of the Soviets are those implemented by only them at their sessions. These powers ensure the functioning of the Soviets as working institutions and serve as an important legal guarantee "of measures taken by the Soviets to organise themselves and of their supremacy

32 Ibid.

33 Ibid., p. 28.

over their executive machinery in solving fundamental questions of state administration and economic and socio-cultural development, including the creation of corresponding administrative bodies, the approval or appointment of officials, and the monitoring of their work".³⁴

The laws on local Soviets adopted in 1968-71 proceeding from the concept of exclusive powers make it possible to demarcate and define more clearly the basic nature and significance of the Soviets. They contain two fundamental propositions in regard with the exclusive powers of the Soviets: first, they establish the norm that any matter falling within the jurisdiction of a given Soviet may be considered and resolved at a session of the given Soviet; and secondly, they provide a list of specific questions that may be examined and resolved only at the session of the corresponding Soviet.³⁵

It was in March 1967 that the Central Committee of the CPSU in its resolution on "Improving the Work of Rural and Township Soviets of Working People's Deputies" called them the "supreme authority within their area".³⁶ Again in March 1971, it passed a resolution "On the Further Improvement of the Work of District and Town Soviets" and called upon the

34 Ibid.

35 Ibid., p. 29.

36 V.M. Chkhikvadze, ed., The Soviet Form of Popular Government (Moscow, 1972), pp. 86-87.

local Soviet organs to show greater initiative and exercise greater influence in all the economic, social and cultural matters affecting their localities. Accordingly, in 1968 and 1971 the Presidium of the Supreme Soviet of the USSR adopted model statutes on rural, township and district and town Soviets and also issued ordinances defining the basic powers and functions of local Soviets in economic, social and cultural matters and enhancing the democratic principles of their work.³⁷ The Law on the Status of Soviet Deputies enacted by the Supreme Soviet of the USSR in September 1972 in pursuance of the resolution of the 24th Congress of the CPSU marked the culmination of the whole process of enhancing and standardizing the work of local Soviets of working people's deputies. Following the All-Union legislations, various union and autonomous republics have adopted analogous laws in consideration with and reflecting national and local specifics. All these decrees and laws have been sufficiently broadened, systematized and supplemented with the help of new organisational legal guarantees.³⁸

Until recently, the potential of local Soviets to influence economic and socio-cultural development was limited

37 V.M. Chkhikvadze, The State, Democracy and Legality in the USSR (Moscow, 1972).

38 Bidhu Bhusan Mohanty, "Local Soviets : A Study of People's Participation in Decision-making and Implementation" (M.Phil Dissertation, Jawaharlal Nehru University, School of International Studies, New Delhi, 1977), p. 134.

chiefly by the fact that they lacked sufficient concrete powers. Local organs of state power including district, city and city district Soviets were not empowered to make the final decisions on many matters related to local life. Their role was often confined to "assisting" various economic organisations. While a number of measures to eliminate this abnormal situation were taken earlier, the new laws defined those legal norms, and those juridical guarantees and organisational means for the implementation of these norms which guarantee a real and significant rise in the role of various echelons of the local Soviets.³⁹

Seen against this background, the new Constitution of the USSR adopted in 1977 not only takes the above-mentioned development of the Soviets into account but also streamlines further the Soviet political system including the Soviets. For, as the Constitution states, "The principal direction in the development of the political system of Soviet society is the extension of socialist democracy, namely ever broader participation of citizens in managing the affairs of society and the state, continuous improvement of the machinery of state...consolidation of the legal foundations of the state..."⁴⁰

In particular, it calls upon the Soviets to "direct

39 N.G. Starovoitov, "The District and City Soviets: Current Problems", Soviet Law and Government, vol. 10, no. 4, Spring 1972, p. 303.

40 Article 9, Constitution, n. 17, p. 30. Emphasis added.

all sectors of state, economic, and social and cultural development, either directly or through bodies instituted by them, take decisions and ensure their execution and verify their implementation".⁴¹ For this purpose it stresses, among other things, the principle of accountability of all agencies and organisations of the state to the Soviets and their controlling functions with respect to all executive and administrative organs and personnel thereof. Consequently, the new Constitution reflects "the process of the strengthening of the integration of the different administrative systems in Soviet society [and] the consolidation of the status of the Soviets as the main link in the mechanism for administering governmental affairs".⁴²

At the level of regional and local Soviets, the Constitution itself provides the programmatic perspective for their enhanced status and enlarged powers. The local Soviets, for instance, should "deal with all matters of local significance in accordance with the interests of the whole state and of the citizens residing in the area under their jurisdiction, implement decisions of higher bodies of state

41 Article 93, Constitution, *ibid.*, p. 50.

42 G.V. Barabashev and K.F. Sheremet, "Novaya Sovetskaya Konstitutsiya i nauka Sovetskogo Stroitelstva", Sovetskoe gosudarstvo i pravo, no. 2, 1979: 10, cited in Robert Sharlet, "Constitutional Implementation and Juridicization of the Soviet System", in Donald R. Kelley, ed., Soviet Politics in the Brezhnev Era (New York, 1980), p. 208.

authority, guide the work of lower Soviets of People's Deputies, take part in the discussion of matters of Republican and All-Union significance and submit their proposals concerning them".⁴³ A comprehensive list of rights, duties and functions for them has been provided.⁴⁴ Also their decisions have been made binding on all enterprises, institutions, and organisations located in their area and on officials and citizens.⁴⁵

Following these constitutional-judicial provisions, Union Republics in their own constitutions have detailed out provisions relating to the local Soviets.⁴⁶ Also new laws have been enacted or old laws amended at all levels to fill in the then existing shortcomings and loopholes as also to bring them in accord with the new constitutional provisions. For example, the Supreme Soviet of the USSR passed in June 1980 a Law of the USSR on the "Main Powers of Territorial and Regional Soviets of People's Deputies and Soviets of People's Deputies of Autonomous Regions and Autonomous Areas". Then, to take another example, the Law of the USSR on "Status of

43 Article 146, Constitution, n. 17, p. 65.

44 Articles 146-47, *ibid.*, pp. 65-66.

45 Article 148, *ibid.*, p. 66.

46 See for Constitutions of the RSFSR, and Bashkir ASSR in Legislative Acts, n. 17.

People's Deputies in the USSR" as passed in 1972 was amended in 1979.

The development of the Soviets, inter alia, reflects the fact of changing Soviet society in all spheres as also the effective role the Soviets have had to play in the political process, among others. In order to examine the intra-institutional development of the Soviets as an aspect of the broadening and deepening of the process of political participation, it is intended here to take up three indicators: deputies of the Soviets, the Standing Committees of the Soviets, and social composition of the Soviets and their standing committees.

Deputies

One of the main ways of developing popular participation in the Soviets is to enhance the role of deputies in the practical work of the representative organs of power. There are two reasons for it. First, in so far as the deputies themselves are citizens and given the large number of total deputies in the political process through the Soviets, the bodies of state authority, ⁴⁷ ^{this} itself is an

47 The Soviets of People's Deputies are the bodies of state authority in their respective justification. True, the highest body of state authority of the USSR is the Supreme Soviet of the USSR but then all of them constitute "a single system of bodies of state authority". See Articles 89, 108 and 145, Constitution, n. 17, pp. 49, 53 and 65.

indicator of popular political participation. Secondly, and more important, since the exercise by the Soviets of State power is based on the active participation of each deputy in all the work of the Soviets, these as institution of political participation require actual active participation of a deputy in work of the Soviets. It is necessary therefore that constitutional and legal provisions be provided to create necessary conditions for active and effective participation of deputies in work of the Soviets. But this invariably leads to the question of the status of deputies in the political system.

The basic principle underlying deputies' status are the same for Soviets at all levels. All deputies are considered "plenipotentiary" representatives of the people in their respective Soviets. All of them participate equally in the Soviets' work, deal with matters involved in running the country and fulfil important organisational and supervisory functions. Notwithstanding the difference of powers and functions of different levels of Soviets which also affect the powers and functions of their respective deputies, there are two essential principles that govern the status of all deputies. While on the one hand, they act as the representatives of their constituencies and meet their requirement and attend to the complaints, on the other hand they must be guided by the national interests of the country. This is because in the ultimate analysis, specific

interests could best be satisfied in the context of national-general interests. This objective is sought to be achieved by the principle of democratic centralism. It obliges a Soviet to obey the decisions of a superior Soviet and its various departments. This means that the decisions of a superior Soviet are binding on subordinate Soviets and their deputies.⁴⁸

The theory and practice of popular representation in the Soviet political system does not permit professional deputies. As a result deputies are always in contact with the real needs and interest of the people, of their classes and social strata; and also with the wishes and aspirations of the masses since deputies also continue to work among them. This helps strengthen the Soviets' ties with the people, in particular with their work collectives. In 1977, the average number of deputies in a Soviet ranged from 33 at the village level to 78 in the raions, 134 in the cities, and 218 in the oblasts.⁴⁹ In the local Soviets alone there were 2,274,699 deputies in 1980. Figures indicate a steady growth in number of deputies from 1959 onwards. Thus, even though the number of local Soviets never reached the peak of 57,366 Soviets in 1959 (50,991 Soviets in 1980), the number of deputies

⁴⁸ A. Bezuglov, Soviet Deputy (Legal Status) (Moscow, 1973), p. 28.

⁴⁹ Hough and Fainsod, n. 1, p. 487.

uninterruptedly grew from 1,801,663 in 1959 to 2,274,699 in 1980.⁵⁰

Not number alone. The role of deputies in social, political, economic, cultural, and indeed in all other spheres has markedly increased in the recent period. For example, deputies' groups were in existence in some areas even before the 22nd Party Congress. But they became universal only afterwards. As they operate today, they exist either on a territorial basis, or on an enterprise basis. In the large cities the territorial unit is often the microraiou. It is a division within a city borough (i.e. raion) which is parallel to the area covered by a Zhek, a housing management office of the borough Soviet. Wherever there is large industrial plant the various deputies working in the plant form a deputies group. In the rural areas all deputies of various Soviets living in the area belong to a deputies' group which meets in the village hosting the village Soviet. In the cities such deputies' groups may consist of thirty to thirty-five members.⁵¹

The deputies' groups have no executive structure. But they elect a chairman who convenes monthly meetings. The

50 See Table V.1.

51 L.G. Churchward, "Public Participation in the USSR", in Everett M. Jacobs, ed., Soviet Local Politics and Government (London, 1983), pp. 42-43.

groups are intended to serve as clearing houses for Soviet business and to assist deputies in realising electors' demands. The groups are required to meet citizens regularly to hear complaints, requests and suggestions, and to try to help solve problems. They are not supposed to be in competition with standing committees of particular Soviets. But in quite a few cases this probably does occur. This is so because both deputies groups and standing committees are supposed to be responsible for assisting and supervising the activities of social organisations working in the area.⁵² While such situation requires an urgent solution, the fact remains that the deputies' groups "are seen as an organizational reinforcement for the standing committees, the executive committee, and the administrative departments, and a mobilization force in the districts".⁵³

Further, to help review citizens' complaints in matters of housing, larger cities have created "deputies' councils" on the territory of each housing operations office. These councils work in close association with the organisation and instruction departments of the Soviets. Another institution that merits mention is the "deputies' post". This is a small group of deputies assigned to supervise the

52 Ibid., p. 43.

53 Quoted by Everett M. Jacobs, "The Organizational Framework of Soviet Local Government", in Jacobb, ed., n. 51, p. 16.

implementation of a specific resolution or to overcome a particular problem.⁵⁴

It was the 24th Party Congress of the CPSU which noted "the pressing need for a special law defining the status, powers and rights of deputies - from the supreme to the settlement Soviets - and also the duties of officials with regard to deputies",⁵⁵ in order to enhance the authority and activity of deputies. In pursuance of this decision, the Supreme Soviet of the USSR in 1972 adopted the 'Law on the Status of Deputies' which dealt with a broad range of questions associated with defining the authority of deputies, their rights and duties, relationships to the Soviets and to the executive-administrative, and other organs of government. It required the deputy to participate actively in the work of a Soviet and provided with provisions guaranteeing the rights of deputies and creating the necessary conditions for fruitful work on their part. It required all organs of government, enterprises, institutions, organizations and officials to co-operate with deputies in exercising their powers.⁵⁶

54 Ibid., pp. 16-17.

55 Report of the CPSU Central Committee to the 24th Congress of the Communist Party of the Soviet Union (Moscow, 1971), p. 92.

56 "The Law on the Status of Deputies to the Soviet - in Action", Soviet Law and Government, vol. 14, no. 1, Summer 1975, p. 67.

By 1975 in all Union and autonomous republics, the work of adopting the amendments and supplements both to the laws on local Soviets of Working People's Deputies and to other legislations of the republics deriving from the 'Law on the Status of Deputies' had been completed. The required amendments to the legislation on the procedure for reimbursement of expenditure due to performance of duties as deputies had been adopted and the procedures and conditions for free transportation defined.⁵⁷

As a result, state organs, mainly the local Soviets and their executive and administrative agencies began to play considerable attention to the work of deputies and to creation of favourable conditions for the exercise of their authority as deputies. By 1975, in accordance with the requirements of the 'Law on the Status of Deputies' and of the subsequent legislation of the Union republics, it had become the general rule to inform deputies well ahead of time of the date and place of sessions of Soviets and of the questions to be taken up there. Deputies were provided beforehand with the needed materials on the matters to be discussed in the sessions.⁵⁸

The 1977 Constitution of the USSR has included the essence of these earlier legislations in order to substantially

57 Ibid., pp. 67-68.

58 Ibid., p. 69.

enhance the powers, functions and responsibilities of the deputies and give them constitutional status. Thus, it has made it the right of deputies to address enquiries to the appropriate state bodies and officials who are obliged to reply to them at sessions of the Soviets. Then, the deputies have the right to approach any state or public body, enterprise, institution or organisation on matters arising from their work as deputies and to take part in considering the questions raised by them. It has been made obligatory on the part of the above-mentioned institutions and organisations to receive deputies without delay and consider proposals within the legally stipulated time-limit.⁵⁹

As for the favourable and necessary conditions, among other things, the Constitution provides that deputies should be released from their regular employment or duties, with retention of their "average earnings at their permanent place of work" in order to help them perform their duties whenever legally required.⁶⁰

These and similar provisions have also been included in the Constitutions later adopted by the Union Republics and Autonomous Republics.⁶¹ But more significant is the fact

59 Article 105, Constitution, n. 17, pp. 52-53.

60 Article 104, *ibid.*, p. 52.

61 See Constitutions of the RSFSR and Bakhshir ASSR in Legislative Acts, n. 17.

that to give effect to the new constitutional provisions regarding the deputies, the Supreme Soviet of the USSR amended in 1979 its earlier all-Union law "On the Status of People's Deputies in the USSR" amended in 1979. ~~It is an all-Union law "On the Status of People's Deputies in the USSR".~~ This further strengthened conditions for a more regular, extensive and effective exercise of their duties and functions. The amended law, for instance, details out a deputy's relations with his electors, as also his accountability and responsibility to them,⁶² relationships with the Soviet and its bodies and so on.⁶³

62 Accountability of deputies to their electors is ensured in many ways. However, if all the other means fail for those deputies who would not live up to the mandates and expectations of the electors as also the constitutional requirements, the electors have the right to "recall" such deputies. Thus, presumably between 1970 and 1980 or so, about 4,000 deputies were recalled from the Soviets at various levels. This, on the one hand, shows the effective exercise of this democratic right of "recall" by the Soviet people. On the other, it has proved a "fine" incentive for encouraging responsibility in the deputies. This mechanism has only been strengthened with the amendment in 1979 to the Law of the USSR "On the Procedure Governing the Recall of a Deputy of the Supreme Soviet of the USSR", as passed in 1959. See Developed Socialism: Theory and Practice (Moscow, 1983), p. 177; for the amended law see "Law of the USSR on the Procedure Governing the Recall of a Deputy of the Supreme Soviet of the USSR", in Legislative Acts, n. 17, pp. 239-42.

63 For the amended text, see "Law of the USSR on the Status of People's Deputies in the USSR", in Legislative Acts, n. 17, pp. 197-211.

These and other developments have led to a considerable growth in the role of deputies as an integral part of the Soviets. According to the annual Reports of the Department on the Work of Local Soviets of the Presidium of the USSR Supreme Soviet, "formal performance of deputies, whether measured in terms of number of questions asked by deputies, number of problems discussed in Soviets and Standing Committees, number of deputies participating in Soviet discussions, numbers of citizens involved in social organizations working under the direction of local Soviets, or numbers of citizens attending report-back meetings, also shows steady improvement".⁶⁴

The Standing Committees

The multifarious questions to be considered by the Soviets, their organisations and forms of their activity make it necessary to have standing committees in the Soviets. The Standing Committees are permanently acting auxiliary bodies of the Soviets. They, as organs of Soviets, make for continuity in the work of the representative body and promote complete implementation by the Soviets of their authority.⁶⁵

64 Churchward, n. 51, p. 41.

65 A.T. Leizerov, "A Study of the Effectiveness of Village and District Soviets in Belorussia", Soviet Law and Government, vol. 14, no. 1, Summer 1975, p. 93.

They are formed on a functional basis and parallel to that of the main administrative department of the Soviets. Their tasks include supervising the implementation of decisions of the particular Soviet as also of superior organs, preparing questions for the sessions of the executive committee and carrying out mass mobilization work.

As a part of the development of the Soviets, various measures have been taken to increase the role of their standing committees. At the first session of the Seventh Supreme Soviet of the USSR, the report by N.V. Podgorny, the then Chairman of the Presidium of the USSR Supreme Soviet, "On Organizing the Standing Committees of the Soviet of the Union and the Soviet of Nationalities" underlined the major role of the standing committees in social and economic development. Until the mid-'sixties, the normative regulation of the organisation and activity of the standing committees of the Supreme Soviets lagged seriously behind their level of political activity, and this made their work more difficult. The adoption of the 'Statute on the Standing Committees of the Chambers of the USSR Supreme Soviet' played a decisive role in eliminating this discrepancy. Similar legislation in the union republics either established such statutes for the first time or replaced the obsolete laws.⁶⁶

66 Krievenko, n. 30, pp. 240-41.

As distinct from the earlier statutes, the new ones, for the first time, clearly defined the monitoring of the activity of ministries, agencies and other organisations as one of the basic tasks of the standing committees. Secondly, the new statutes enlarged the rights of the committees in implementing this function and also simultaneously enlarged the guarantees of the implementation of these rights.⁶⁷

Some of these guarantees relate to the composition of the committees. Whereas some of the earlier legislation contained no limitation at all in this respect, all the statutes adopted since 1967 establish the rule that members of Council of Ministers are ineligible for election to such committees. The appearance of this rule must be explained by the development of the standing committees specifically as monitoring bodies.⁶⁸

Secondly, the new statutes bar the deputies who are members of supreme courts and the procurators of republics from election to the standing committees. The standing committees are called upon to help implement monitoring by the Supreme Soviets of the activity of supreme courts and procurators in the respect to adherence to socialist legality. The new rule should be regarded as a special

67 Ibid., p. 241.

68 Ibid.

legal guarantee of the monitoring activity of the standing committees.⁶⁹

Another innovation in improvement in the legal guarantees of implementing monitoring functions was the clear-cut definition of the specific duties of the heads of state organs. The previous statutes often granted the committees the right to demand from ministries, agencies and other organs and organisations the presentation of the required materials and to call representatives of such bodies before their meetings. The new statutes contain a special provision which stipulates that such requests are binding upon the organs in question. This is of fundamental importance. Moreover, they also establish specific obligations not for representatives of ministries and agencies but for the heads of these organs. It was practical experience which was responsible for the formulation and adoption of this rule: as it happened, often persons with no necessary competence appeared before committee meetings, and this caused serious difficulties in consideration of problems, thereby diminishing the effectiveness of the committee's work.⁷⁰

69 The prevailing legislation provides that only the supreme courts shall be responsible to the Supreme Soviets and contains analogous rule in regard to the procurator of republics. This is partly the reason why in some statutes the procurator of the republic is not found in the list of persons ineligible for membership in a standing committee. See *ibid.*, p. 242.¹

70 *Ibid.*, pp. 242-3.¹

The standing committees not only engage in the monitoring activities but also have a much larger role in the legislative process. The latter include preparation of conclusions on various questions and amendment to bills submitted for the consideration of the Supreme Soviet of the USSR by the Government and other state bodies, mass organizations and deputies and elaboration of bills by committees' own initiative or on the instructions of either chamber or the Presidium of the Supreme Soviet of the USSR.⁷¹ The same applies to the other levels of Soviets. The greater frequency of local Soviet sessions, in particular, means that a greater number of decisions that are passed and that need to be prepared by the standing committees. In addition, they also prepare questions for sessions of the executive committees. In 1974, they participated in the preparation of over 465,000 questions for sessions of the local Soviets in the country as a whole and over 839,000 questions for discussion by the Soviets' executive committees.⁷² The figures for 1969 were 300,000 questions for consideration at sessions and 650,000 for consideration by the executive committees of the Soviets.⁷³ In the year of 1973, the

71 The Soviet Parliament (A Reference Book) (Moscow, 1967), p. 52.

72 Hough and Fainsod, n. 1, p. 304. In 1974 there were 50,600 Soviets in the Soviet Union. See *ibid.*, p. 487.

73 P. F. Pigalev, "Improving the Functioning of the Soviets of Working People's Deputies", Soviet Law and Government, vol. 9, no. 3, Winter 1970-71, p. 232.

standing committees of local Soviets took part in preparing over 440,000 matters for consideration at sessions of such Soviets and over 750,000 for discussion at meetings of their executive committees. The standing committees made about 350,000 reports and co-reports to sessions of Soviets.⁷⁴ In 1980, the standing committees prepared 334,000 reports and supplementary papers for sessions of local Soviets and 856,000 questions for the consideration of Soviet executive committees.⁷⁵

The head of the socialist legality and public order standing committee of the Moscow Soviet - a scholar at the Institute of State and Law of the Academy of Science - reported that Committees at his level met six times a year and that they required a great deal of their chairmen's time. A sociological study of raion deputies in Leningrad found that the average deputy spent twenty-two hours a month to perform his or her obligations as a deputy, but that eight per cent devoted over forty hours a month to them and that two to four per cent worked for over sixty hours a month.⁷⁶

The action of the Supreme Soviets of the USSR and of Union republics in increasing the number of their standing committees and in enlarging their membership were of major

74 On the Status of Deputies, n. 50, p. 71.

75 Jacobs, n. 53, p. 15.

76 Hough and Fainsod, n. 1, p. 486.

significance in enlarging the role of standing committees in monitoring the activities of ministries and agencies and also in extending the range of people's actively involved in government. Expansion of the functions of many of the committees already in existence played the same role.⁷⁷

Though in the first half of the 'sixties there was some increase in the role of the Supreme Soviet committees, it was hindered by very limited number of its standing committees and of deputies participating in them. Thus the Council of Nationalities had only four standing committees in 1964 (Legislative Proposals, Budget, Foreign Affairs and Credentials) and the Council of Union had five (four counterparts to the Council of Nationalities Committees plus an Economic Committee) with the committees of both houses containing a total of 219 deputies. In the post-Khrushchev period the number of Supreme Soviet committees was increased several times, and in early 1978 there were fifteen in each house with each committee having 35 members (except for the Planning-Budget Committees in each house which has had 45 members each) totalling 1,070 deputies for the thirty committees of both houses.⁷⁸ The number of standing committees also rose at other levels of the Supreme Soviets and local Soviets. Thus, whereas 145 standing committees

77 Krivenko, n. 30, p. 245.

78 Hough and Fainsod, n. 1, p. 373.

were set up at the first session of the sixth Supreme Soviets, 184 existed at first session of the seventh Supreme Soviets and as of June 1969 this figure had reached 200.⁷⁹ As for local Soviets, their standing committees too have grown numerically, for instance, from 328,765 in 1975 to 333,547 in 1981.⁸⁰

The overwhelming majority of deputies of the Soviet function in various standing committees. Thus, out of 2,220,000 persons elected as deputies to local Soviets in 1975, 1,776,000 served on their standing committees.⁸¹ This was in contrast to the year of 1959 when only 1,308,945 deputies were members of standing committees.⁸² In fact, by 1980 there were 1,805,378 deputies serving on the standing committees of local Soviets. Since 1975, almost 80.8 per cent of all local Soviet deputies each year have worked in the standing committees. This too appears to be an underestimate. For, members of executive committees and heads of departments and administrations are often barred from membership of standing committees. It seems therefore that almost all eligible deputies are also members of one standing committee or another.⁸³ The same situation prevailed at the level of Supreme Soviets. Thus,

79 Krivenko, n. 30, p. 245.

80 Jacobs, n. 53, p. 15.

81 Hough and Fainsod, n. 1, p. 304.

82 Richard C. Gripp, Patterns of Soviet Politics (Illinois, 1963), p. 134.

83 Jacobs, n. 53, p. 15.

for example, while only 62 deputies of the USSR Supreme Soviet served on the Legislative Proposals Committee during 1963, 450 persons were members of the sub-committees of the Legislative Proposals Committee by 1975.⁸⁴

In addition to the deputies, hundreds of thousands of common citizens are involved as voluntary workers in the work of the standing committees. Thus, 2,611,000 persons worked as volunteer activists who assisted the standing committees of local Soviets in 1975.⁸⁵

Indeed, citizens are drawn on voluntary basis into various types of executive work within the Soviets, e.g. in the executive committees. In 1980, there were about 30 million "Soviets' volunteer helpers".⁸⁶ Moreover, the local Soviets also contain a number of wholly volunteer departments (7,684 of them in 1975 staffed by 66,361 volunteers), and they recruit a much larger number of persons (426,000 in 1975) as volunteer instructors and inspectors for the regular departments and administrative bureaus. Advisory Councils are also attached to departments - e.g. the regional education department.⁸⁷

84 L. G. Churchward, Contemporary Soviet Government (London, 1975), p. 270.

85 Hough and Fainsod, n. 1, p. 304.

86 Developed Socialism, n. 62, p. 176.

87 Hough and Fainsod, n. 1, p. 304.

The broad social base of the standing committees are obvious. It is largely for this reason that their importance as institution or sub-institution of public participation is marked. For Soviet general assemblies are large, except in villages, where the maximum membership is 35. Thus, provincial Soviet assemblies exceed 200, and city Soviet assemblies usually number from 700 to 1,000 deputies. Most cities are sub-divided into boroughs, each having its own Soviet assembly and standing committees.⁸⁸

Then, the number of standing committees per Soviet has tended to be greater in the more important Soviets. In 1977, Krai, oblast and okrug Soviets (taken as a whole) had an average of 14.8 standing committees per Soviet; for raion Soviets, the average was 10.0; city Soviets, 10.5; city borough Soviets, 13.0; workers' settlement Soviets, 7.6; and village Soviets 5.8. Though, on an average, there are relatively less number of standing committees within village, workers' settlement and small-town Soviets, they even so perform especially important functions since these Soviets otherwise too lack an administrative apparatus.⁸⁹

In view of all these facts, the standing committees of local Soviets has been considered as "probably the most significant representative organ in the system of Soviets. Certainly, much more is accomplished, in terms of

⁸⁸ John N. Hazard, The Soviet System of Government (Chicago, 1980), p. 50.

⁸⁹ Jacobs, n. 53, p. 16.

government activity, in the standing committees than in the sessions of the Soviets".⁹⁰

Social Composition

Every representative institution has certain norms of representation. The Soviets are no exception. But the nature, scope and operation of norms of representation vary from one system to another, and even from one polity to another. Needless to say that these norms have a profound impact on composition of the representative body. However, in a society having diverse and antagonistic class structure, the representative body tends to be unrepresentative of the actual society. It is mostly the dominant classes who also largely occupy or control the political institutions including the representative state organs. Hence the norms too are designed and they evolve themselves to fulfil this purpose of class-rule.

In contrast, the representative bodies in a socialist society like the Soviet Union, given its egalitarianism and evolution thereof, reflect the social structure of its society. Hence, the Soviet norms may seem to be unique and are different from, say, the United States of America. For instance, for the post of deputies to the Soviets, local party organisations are directed to put

90 Cited in Jacobs, *ibid.*

forward "Communists and non-Party people who are the most worthy representatives of the working class, Kolkhoz (collective farm) peasantry, and intelligentsia - people who have well recommended themselves in their work and social-political life, who are deeply devoted to the ideas of Communism and to the cause of the Party, and who possess high mental qualities and organizational abilities".⁹¹

The persons elected to the Soviets, i.e. deputies are not professional legislators but perform their duties in conjunction with another full-time job. Hence, people drawn from a wide range of occupations can be selected and elected as deputies. Thus, Supreme Soviet of the USSR consists not only of ministers and national party leaders but also of regional political leaders, high military officials, factory and collective farms managers, and rank-and-file workers and peasants. Though the majority of Supreme Soviet deputies are men and women who hold some type of political, administrative or supervisory position, in comparative perspective the striking fact about the deputies is the high proportion of rank-and-file workers and peasants among them.⁹² To cite evidence from the Supreme Soviet, Hough and Fainsod observe:

91 Cited in Everett M. Jacobs, "Norms of Representation and the Composition of Local Soviets", in Jacobs, ed., n. 51, p. 78.

92 Hough and Fainsod, n. 1, pp. 364-5.

The Soviet leadership claims that 50.7 per cent of the deputies elected in 1974 were workers and collective farmers, but this statistics is an inflated one by Western definitions (All collective farm personnel - including the Chairman, middle management and professionals - are included in the term collective farmers). Nevertheless, a substantial and growing number of real workers and peasants are elected to the Supreme Soviet. If supervisors below the level of farm brigadiers and industrial foremen are included (and they should be by normal Western definitions), the proportion of workers increased from 8 per cent in 1950 to 17 per cent in 1954 to 33 per cent in 1962 to 42 per cent in 1974. Approximately another 2 per cent of the deputies are non-supervisory white collar personnel - primarily doctors, teachers, agronomists, and veterinarians. 93

It is the same with the local Soviets. A large proportion of deputies to the local Soviets (between 20 and 40 per cent, depending on level of local Soviet) is elected by virtue of the deputy's authority or position in society. Deputies by ascription include party, trade union and Komsomol officials; Soviet officials, kolkhoz chairmen and their deputies; directors and specialists of enterprises; sovkhos (state farm) directors; and principals and teachers of scientific, cultural or educational institutions. However, ^{as} one goes down the ladder of the Soviets, the proportion of deputies selected by "ascription"

93 Ibid., p. 365.

tends to be lower. Conversely, the higher the level of Soviets, the greater the proportion of deputies by "ascription".⁹⁴

Indeed deputies by "ascription" too are part of the society and representatives of their respective social strata and groups, and to that extent they also represent their respective social structure. But for the rest, and in general, norms are laid down to have defined proportions of representation in the Soviets of various groups in the population. Though supposedly it is the party committees which lay down these general norms, the collectives and organisations enjoy discretion (within the norms) of nominations; that is to say "they merely take care that the general principle of proportionality of representation of the various population groups in the Soviets are not infringed".⁹⁵

Within this general representative principle, it is expected that 'the best of the best' would be chosen for nomination as deputies. For instance, it has been suggested that considerable attention is placed on selecting candidates with good production records or that since the inception of the economic reform, a great deal of emphasis is laid on

94 Jacobs, n. 91, p. 78.

95 Cited in *ibid.*, p. 79.

those with high professional qualifications who "know how to make correct decisions and know how to find ways to implement them".⁹⁶

The precise principles or norms that govern the selection of deputies to local Soviets are not known. But Aleksee and Perfilev list three general principles of representation: social class; professional-occupational and demographic factors; and training the workers in state administration.⁹⁷

The social-class principle refers to the commonly held 'criteria' of social class, education, party (implying also Komsomol) membership and nationality as also social origin, public activity and length of party membership. The second principle takes into account deputies' professional and occupational qualifications to cope with responsibilities in planning, budget-financial matters, supervision of industries and enterprises subordinate to a particular Soviet and so on. The demographic principle stands for representation of large groups almost neglected in other political systems, specifically women and young people. The last but not the least important principle (training the workers in state administration) relates to the sizeable turnover of

96 Cited in *ibid.*, p. 78.

97 See for a detailed reference on the norms of representation in the Soviets, *ibid.*, pp. 78-84.

Soviet membership at each election.⁹⁸

The general idea beneath these principles is that the composition of local Soviets has in recent years been more in correspondence with and mirrors the social structure of Soviet society. This, however, does not imply that the composition of the Soviets would duplicate exactly in proportional terms the sex, age, class, occupational or even political (i.e. party membership) structure of Soviet society. All the same, given the evolution of social structure in recent decades together with political reforms, the composition of local Soviets have come to more closely resemble the socio-economic structure of the country. Obviously, at a higher level of development. For instance, the local Soviets have become much more democratic and broad-based than a decade or two ago. Thus, they contained only 18.8 per cent of workers as their deputies in 1959. But in subsequent years there has been a constant growth. In 1969, just a decade later, the proportion of workers increased to 35 per cent of the total elected deputies to the local Soviets. In 1975 this further grew to 40.5 per cent and still further to 43.3 per cent in 1980.⁹⁹

Another estimate shows that workers constituted only 27.7 per cent of deputies to city Soviets in 1954-55

98 Ibid., pp. 79-80.

99 See Table V.1.

but increased to 47.2 per cent in 1963-64 and 59.5 per cent in 1972-73.¹⁰⁰ Figures for presumably 1980 indicate that workers and collective farmers together comprised over 50 per cent of the deputies to the Supreme Soviet of the USSR,¹⁰¹ the Supreme Soviets of the Union and Autonomous Republics, and 68.7 per cent of the deputies to local Soviets.¹⁰² As more than 80 per cent of the deputies are elected to the standing committees, these bodies also have memberships with a broad social base.¹⁰³ The educational composition of the Soviets too has undergone a radical transformation in the recent decades. Thus, there were only 40.1 per cent of deputies to local Soviets who had completed higher or secondary education. By 1977 the figure had gone up to a remarkable peak of 74.3 per cent.¹⁰⁴ This is only expected in view of the growing educational standard among the Soviet people.

In the context of social composition of local Soviets it seems to be imperative to discuss a very important

100 Jerry F. Hough, "Political Participation in the Soviet Union", Soviet Studies, vol. 28, no. 1, January 1976, p. 11.

101 The Supreme Soviet of the USSR as elected in 1979 had among its deputies 34.8 per cent of workers and 16.3 per cent of collective farmers. See Developed Socialism, n. 55, p. 177.

102 Yuri Volkov, Social Development of Soviet Society: Problems and Prospects (Moscow, 1983), p. 228.

103 Hough and Fainsod, n. 1, p. 487.

104 See Table V.1.



and much-stressed factor. Some Western Sovietologists tend to suggest that actual composition of the Soviets do not really reflect the officially suggested ideal correlation, between it and the social structure. The main contention to prove this point relates to the substantial proportion of party members (including those of Komsomol) in the local Soviets. The argument seems to be based on wrong methodology. First, a different variable, that of party affiliation is sought to be imposed on variables that are exclusive on their own count. Secondly, a contrast is projected between party members who also share certain other variables like social-occupational status with non-party members who however belong to the same strata. The fact is that if one takes the variable of party affiliation, he enters into a debatable question of political judgement. For, in a socialist country like the Soviet Union, party control of any institution is officially described as desirable, though not party bureaucratism. After all, membership of the CPSU is constantly growing by virtue of which alone party members in one form or the other are bound to be in the Soviets in a substantial number. And then, party members too are a part of Soviet social structure in so far as they also belong to working class, peasantry or intelligentsia.

To conclude, the progressive trend of social composition of the Soviets and their derivative bodies

combined with the other institutional development of all these bodies merely attest to the fact that mass political participation through the Soviets is tending to grow with the changes in Soviet social structure.

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TABLE V.1

COMPOSITION OF LOCAL SOVIETS,
1959-80

Year	No. of Soviets	No. of Deputies	Women	CP members and candidate members	Komso-mol members	Workers	Kolk-hozniks	Deputies under 30 years old	Deputies with higher or secondary education
1959	57,366	1,801,663	38.3	45.0	7.4	18.8	43.2	22.1	40.1
1961	49,858	1,822,049	40.7	45.4	7.7	23.8	38.0	22.2	39.5
1963	47,225	1,958,565	41.6	45.3	7.2	26.9	35.2	21.8	41.6
1965	47,736	2,010,540	42.7	45.2	5.6	28.8	33.3	19.5	44.1
1967	48,770	2,045,419	42.8	46.2	4.8	29.6	31.3	16.3	47.7
1969	49,548	2,071,333	44.6	45.1	12.7	35.0	29.3	23.8	53.7
1971	49,833	2,166,004	45.8	44.5	14.8	36.5	28.8	25.6	59.4
1973	50,194	2,193,195	47.4	43.9	17.3	39.3	28.0	28.2	64.3
1975	50,437	2,210,932	48.1	43.8	18.7	40.5	27.2	30.1	69.0
1977	50,602	2,229,785	49.0	43.2	20.3	42.3	26.2	32.4	74.3
1980	50,991	2,274,699	49.5	43.1	21.1	43.3	25.4	33.3	n.a.

324

Source: Everett M. Jacobs, "Norms of Representation and the Composition of Local Soviets", in Everett M. Jacobs, ed., Soviet Local Politics and Government (London, 1983), p. 82.

CHAPTER VI

CONCLUSION

Science and technology play significant roles in the development of history - history as an index of the development of humanity in the past, present or future. Their roles qualitatively differ in different societies according to the prevailing socio-economic system, e.g. capitalist and socialist. The difference may not be as one of the degree and nature of their development but it is invariably marked in their impact on the society.

While science as the "cognition of laws that govern the objective world and that we obtain from practice and for practice", and technology as the "means of production which mankind creates and uses its productive activity", are as old as the existence of organised human life, modern science and technology may be traced back only to the 'Industrial Revolution'. In so far as the 'Industrial Revolution' is associated with the development of capitalism in Europe (and America), modern science and technology too owe their birth and development to the latter. Further, in so far as capitalism has been a historically advanced stage in the development of humanity compared to its preceding mode(s) of production, science and technology should also be credited with

their contribution to the onward march of humanity. However, as capitalism has been a socio-economic system that exploits the vast masses of the society, science and technology in its service could not, remain neutral, and so have been used as instruments of exploitation.

Socialism, on the other hand, as a socio-economic system that liberates humanity from all kinds of exploitation associated with the previous modes of production also liberates humanity from the exploitative use and nature of science and technology and puts them along with other resources of society, to the service of mankind for its further progress and development in all aspects of life. In particular, science and technology help establish socialist social relations and/or consolidate them and thus help in "building material and technical basis of communism", by its contribution to the enhancement of the productive forces and also by modernising the content of labour. By virtue of their such an important place in socio-economic spheres, they are developed in a planned manner under socialism. Since they vitally influence socio-economic structures of a socialist society and since the political development of society, i.e., political participation of the masses, is conditioned by its socio-economic structures, there is a plausible relationship between the political growth in terms of the popularisation (democratisation) of decision-making and the development of science and technology.

These are not merely hypotheses for the simple reason that they are empirically proved by the past and present history of the capitalist societies and of the socialist societies, especially the Soviet Union.

Thus, the extremely low and lop-sided development of science and technology in the Tsarist Russia may be contrasted to their planned development in the post-Revolution Soviet Union, since 1917 till present day. Their utmost significance is underlined by their contribution to creating socio-economic basis of socialism till 1936, to consolidation of socialism in the later years, and finally to preparing the material and technical basis of communism today underway in the Soviet Union.

The STR as a qualitatively new stage of the development of science and technology in the mid- 'fifties of the twentieth century is another landmark in the history of science and technology and also in the human history. Whether the process of the STR began in the capitalist societies, e.g. the United States or in the socialist society, e.g. the Soviet Union, is debatable and requires a separate investigation. But its contradictory impact on the two societies is obvious.

Seen in a total societal framework, the STR has further exacerbated the contradictions in capitalist societies between labour and capital. The monopoly capitalists

have been using it for more and more profit through improvement of the means of production and displacement of labour etc., though at the same time slumping production and creating large-scale unemployment etc., for which private ownership of the means of production and not the STR per se may be made responsible.

In contrast, in the socialist societies, e.g. the Soviet Union, where social ownership of the means of production prevails and where there is conscious attempt by the State of equitable distribution of the social wealth, the STR is being used to stimulate qualitative and quantitative growth of the productive forces and to increase the social wealth in order to bridge the gap between different classes and strata of the society, between urban and rural areas, between agriculture and industry and, so on and so forth.

It was not for no reason, therefore that the Soviet Union made a comprehensive and indepth Marxist-Leninist analysis of the STR, examined its impact on the Soviet society (and on the capitalist society) and, finally included it as an important plank of the policy of building up a 'material and technical basis of communism' in the Soviet Union. Despite its initial, avoidable negative theoretical attitude to the STR, the Soviet Union, in practice, continued with research and innovations in cybernetics and

automation, the chief components of the STR and before long corrected its theoretical mistakes as well.

In a social and economic process drawing a strict dividing line is desirable and undesirable since the process is a continuum and events interlinked. Yet some arbitrary dividing line is unavoidable for research purposes. Thus, though the origin of the STR may be traced back to the early 'fifties, its full development was felt only in the late 'fifties. In this respect, in so far as the Soviet Union is concerned, the year of 1959 was important for many reasons.

By now, the one-sidedness in the theoretical, ideological investigations into the STR was over. Coupled with the fact that by now cybernetics and other allied sciences had developed at a tremendous scale, this positive reassessment gave a further fillip to this development.

As a result, as early as in 1959 a scientific council for co-ordinating work in the new science, i.e. cybernetics, was set up under the USSR Academy of Sciences. Also in 1959 the technique was found to introduce into the computer the entire mass of information and norms for an enterprise which made it possible to solve various problems of identical economic nature on the basis of a foundation of data fed to the computer once and for all. This was a significant landmark since earlier computers were used to

solve only individual calculation tasks, e.g. determining a factory's need for material of one kind or another, with no system or model of inter-connections among the indices sought. Earlier the norms for labour expenditure, materials and other data were fed into the computer separately and manually for each computation job which, among other things, took an enormous amount of time. The new technique sharply reduced the labour outlays associated with introduction of normative data into the computer and considerably increased both the savings they made and interest in creating automatic control system.

The year of 1959 also saw an important political event in the Soviet Union. The Extraordinary Twenty-First Congress of the CPSU was held in 1959 which examined and endorsed the basic directions of the Seven-Year Plan of Development of the National Economy (1959-1965). The fact that the Congress reflected extensively on the concept of 'building the material and technical base' of communism in the USSR, provided a new stimuli to the development of science and technology in the Soviet Union, especially to the STP in its pure research work as also in the application of its technologies to the Soviet socio-economic life. This premise is based on the simple assumption that the STP was the latest stage of the development of science and technology

and marked a qualitative leap in this field and could not but have been taken into account.

In the IIIrd Chapter we have argued that the relationship between the statistical data pertaining to the growth of the productive forces and the STR cannot be absolute. But the fact that compared to the pre-STR years, the post-STR data of the production and the rate of growth are unprecedentedly higher, the contribution of the STR must be underlined. This is all the more since in the post-STR years, the means of production, both in agriculture and industry, have been reequipped and reorganised with new equipments and technologies and the content and nature of labour modernised in requirement and in accordance with the new needs and impetus of the STR.

Together with the acquisition of the new advanced skills and higher education by the people cutting across socio-economic distinctions, as both the prerequisites and results of the STR, the increase in social wealth and its equitable distribution among the people, with special emphasis to favour and uplift the lower class and strata of the people, have led to further narrowing of the socio-economic and cultural differences between the working class and the intelligentsia, the peasantry and the intelligentsia and, so on and so forth.

It should, however, be noted that the trend of social homogeneity has not resulted by keeping stagnant the

conditions of the people relatively better-placed. In other words, the trend of homogeneity and convergence among the people of different classes and strata have been at a higher level. This fact is further buttressed by another significant change in Soviet social structure, namely, the reduction in the number of the peasantry and manual workers which means their absorption (through upgrading of skills and education) into and new recruitments in the working class and intelligentsia and skilled labour. This also means increase in the number of the latter groups.

Another trend to be noted is the emergence of inter-collective-farm cooperation and agro-industrial integration which has been obliterating the traditional features of collective farms. This in association with the application of the achievements of the STR to the rural sector have created conditions whereby another traditional and inherited distinction between rural and urban areas is being gradually bridged.

The trend of convergence and homogeneity, however, is not yet complete. Significant functional, socio-economic and cultural differences persist among different classes and groups in the Soviet society. So is the case with the differences between rural and urban areas, agriculture and industry and, so on. With further development of the STR and its wider application to the reorganisation of

material and intellectual production, these differences would tend to decrease in course of time.

In the preceding chapters we have examined the relationship between the STR and political participation in the Soviet Union with two assumptions: growth and democratisation of political participation; and the contribution of the STR to this political development via the changes in social structure of Soviet society.

For one thing, political participation, meaning thereby participation in the effective decision-making of the society in the social, economic and political sphere, is conditioned by the social/class structure of a given society. In a class society based on exploitation, the decisions are made by the classes which own the dominant means of production, and/or their political representatives who make decisions according to the needs of the former. In a bourgeois democratic country in particular, while people by law possess equal rights to participate in decision-making process and administration of the state, these are virtually nullified due to various subterfuges and devices contained in the law itself or created in practice through various mechanisms. More importantly, it is the very substantial socio-economic, and hence political, inequalities that debar the general masses to participate or have a final say in any decision-making process or in decision itself.

In any case, political participation in such societies is confined to a very narrow section of the society.

In a socialist country, on the other hand, devoid as it is of exploitation of man by man and committed as it is to the all-round development of society and its individuals, it becomes imperative for the State and the Communist Party to involve more and more people of all the groups with constant and decisive participation in the administration of the state and the society. The socialist democracy, however, passes through various stages in terms of popular political participation as does the society itself in socio-economic aspects. In other words, as the tasks of socialist and communist construction are not solved overnight and as the legacy of the old system based on exploitation is only gradually overcome in social relations and public consciousness, political participation of the masses too pass through such stages, most of the time both interacting with each other.

While political participation of the masses cannot be simply guaranteed by political institutions, with other conditions having been fulfilled, they are necessary and inevitable channels through which the masses involve themselves into decision-making process. It is to be noted that in this process of the development of political participation the institutions undergo significant structural, qualitative and quantitative transformations and

and sometimes it may be necessary to create new institutions of sub-institutions.

It is in this perspective that two political institutions of the Soviet society, namely, the CPSU and the Soviets, have been examined at length to assess the development of mass political participation in the wake of the STR there.

To take the Soviets first, what emerges out of the study is that from the early 'sixties onwards, the powers and functions of the Soviets, especially the local Soviets and their derivative bodies which are most numerous and close to the working people and whose meetings are frequent, have been more delineated and increased. The local Soviets have been endowed with the exclusive powers and the jurisdiction of their activities enlarged through various central and local laws. This is important, for, until the recent past the potential of local Soviets to influence economic and social-cultural development was limited chiefly by the fact that they lacked sufficient concrete powers. Local organs of state power including district, city and city district Soviets were not empowered to take final decisions on many matters related to local life. Their role was often confined to "assisting" various economic organisations. While a number of measures to eliminate this abnormal situation were adopted earlier, the

new laws defined those legal norms and juridical guarantees (and organisational means for the implementation of these norms) which guarantee a real and significant rise in the role of various echelons of local Soviets.

Secondly, as an aspect of the development of the Soviets, intra-institutional reforms have been carried out in the period under review. While the role of the deputies and the standing committees of the Soviets has markedly increased in the recent past as a result of the extension of the powers and functions of the Soviets in general, special measures have also been taken to enhance the status, powers, rights and duties of the deputies and the standing committees. Necessary legal guarantees have been enacted and facilities provided to give effect to these measures. Electoral and organisational reforms have been undertaken to make the institutions of deputies and standing committees more democratic and broad-based.

Thus, the number of standing committees and their memberships have been considerably increased with the result that more and more number of deputies can participate in day-to-day decision-making process. Increasing participation of the common citizens is reflected, among other things, in the enlarged number of voluntary workers engaged in the work of the standing committees (and various other local administrative bodies).

Finally, the development of institutions of Soviets and their derivative bodies in terms of their greater demonstration and mass political participation is reflected in their changing social compositions. Thus, the membership pattern of these bodies during 1959-1980 shows a relatively higher growth in the proportion of the working class and the peasantry in them. This is but natural given the qualitative and quantitative changes in the Soviet social structure during the same period.

Similar trends may be discerned in case of the CPSU. The Programme of the CPSU adopted at its 22nd Congress in 1961 underlined the need of the enhancement of the role and development of the institution of the CPSU in the stage of full-scale communist construction. To that effect it suggested new areas of initiatives in the work of the party and called for significant organisational, electoral and ideological transformations in itself in order to make it more democratic, ideologically-oriented and broad based.

We took two indicators, namely the membership pattern and social composition and, the party network to examine the process of development of the CPSU.

The conclusions to be drawn is that unlike the pre-1959 period, the post-1959 period has been marked by party membership trends that have been quite regular. The

number of party members has been rising each year with a relatively smaller number of members being expelled. Changes in the rate of increase in party membership and in its social composition have become incremental in character and they have tended to be closely associated with the changes taking place in the societal groups, i.e. classes and strata, from which party members are recruited. Thus, the membership of the working class has steadily increased and that of the peasantry decreased reflecting the similar trend in the Soviet social structure. Similarly, the trend to higher educational levels in the party has continued and rather accelerated during the 'sixties and 'seventies. Finally, in respect of social composition, the most important development in the CPSU, as in Soviet society, associated with the STR, has been a tremendous growth in the number of professional and para-professional specialists which cuts across different classes and strata of Soviet society and is present in all of them.

As for the party network, the study is fully concentrated on primary party organisations which constitute, like the local Soviets, the lowest and broadest units of the CPSU and the bodies of which meet more frequently compared with those of Republican party level or All-Union party levels. It is seen that in addition to the steady rise in the number of primary party organisations, they have

also been made more functional by progressive structural transformations; representations in their bodies have been made more democratic and exclusive; and finally, their monitoring and supervising roles have been effectively enlarged and extended to those which did not have such rights. Consequent to such developments of the primary party organisations their importance in Soviet political life has increased considerably and increasingly larger number of party members participate in their functions.

What has been attempted in this thesis is simply to extract some of the trends in socio-economic development of Soviet society under the influence of the STR and their correlation with political developments, i.e. political participation of the masses, there. The conclusions reached have been markedly positive.

Society and socio-economic-political forces are, however, never stagnant. Since human history always moves forward in a dialectical way, the STR may take a further leap in its development; and even without that, the latest achievements of the STR are yet to be fully and extensively utilised in the Soviet Union. This would contribute to the further progressive development of the social structure of Soviet society and hence to its political development which would both necessitate and enable greater participation of the Soviet people in the decision-making process.

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