

Man produces material wealth to sustain life, exchanges and consumes this wealth, and engages in politics, science, the arts, literature and philosophy. All this constitutes the complex and multiform process of social life, fosters the historical progress of society, its continual development from lower to higher forms.

The philosophers, sociologists and historians that preceded Marx, and Engels, vainly tried to find the dividing line in the complexity and multiformity of social life for phenomena that were "important" and "unimportant," substantial and unsubstantial, necessary and casual. And since the bourgeois sociologists and historians proceeded (and proceed) from some preconceived and pet idea, all their sociological speculations resulted (and result) in unexampled chaos and subjectivism alien to science.

The great merit of Marx and Engels, the founders of the genuine science of the laws of social development, was that they were the first to ascertain "the simple fact, hitherto concealed by an overgrowth of ideology, that mankind must first of all eat, drink, have shelter and clothing, before it can pursue politics, science, art, religion, etc.; that therefore the production of the immediate material means of subsistence and consequently the degree of economic development attained by a given people or during a given epoch form the foundation upon which the state institutions, the legal conceptions, art, and even the ideas on religion, of the people concerned have been evolved, and in the light of which they must, therefore, be explained, instead of vice versa, as had hitherto been the case." *

Since the production of material wealth necessary for life is a primary, basic and permanent historical fact without which there is no society or social life, it follows that the relations of production, are primary and constitute the real foundation, the basis determining political, legal, religious, aesthetic and philosophical views and their corresponding institutions.

In the famous Preface to his Critique of Political Economy, Marx gave the following classical definition of the major thesis of historical materialism on the basis and superstructure:

"In the social production of their life, men enter into definite relations that are indispensable to and independent of their will,

relations of production which correspond to a definite stage of development of their material productive forces. The sum total of these relations of production constitutes the economic structure of society, the real foundation, on which rises a legal and political superstructure and to which correspond definite forms of social consciousness. **

Thus Marx defines the basis as the sum total of production relations corresponding to a definite stage of development of the material productive forces. The political and juridical superstructure, as well as the forms of social consciousness, correspond to, and are determined by, the definite basis of a given historical period.

Lenin held it as Marx's historic merit that in creating the science of society, he drew a dividing line between material and ideological social relations. The latter are a reflection of the first.

Material relations are those production, i.e., economic relations, which, when arising do not first pass through the consciousness of people, while ideological relations, when arising, first pass through the consciousness of people.

e.g. class consciousness

When analyzing the structure of capitalist society and pre-capitalist social formations, Marx and Engels were always guided in all their works by this division of social relations into economic, which are the determinat and ideological which are a reflection of the former, and constitute their superstructure. They always considered the ideas of the ruling class to be the dominant ideas of a given society. The basis and chief element in the superstructure is the state, the law and the ideology of the ruling class, which reflect the economic structure of a given society, protect and consolidate it.

The division of social relations into production or economic relations, on the one hand, and ideological relations, on the other, is the keynote of all the works of Lenin. Historical materialism is unthinkable without this division, just as it is unthinkable without the basic thesis that social being determines social consciousness.

The proposition concerning the basis and superstructure makes it possible to explain not only the relationship between ideological phenomena and the economy of society, but also the relationship between the political the legal and other institutions, on the one hand, and the political, legal and other views of the given society, on the other, as well as

3

the relation of these institutions to the economic system of the given society.

The Marxist-Leninist theory of the basis and superstructure has been further developed in the works of Stalin.

Stalin's Marxism and Problems of Linguistics defines the basis and superstructure, reveals their inner connection and interaction, demonstrates the inevitable elimination of the old, moribund basis and superstructure, and indicates the inevitable emergence and development of a new basis and superstructure. The work exposes the vulgar, simplifying anti-Marxist views on the basis and superstructure and exhaustively discloses the role of the superstructure in the development of society.

* K. Marx and F. Engels, Selected Works, Vol. II, Moscow 1955, p. 167.

** K. Marx and F. Engels, Selected Works, Vol. I, Moscow 1955, pp. 362-3.

WHAT, THEN, IS THE BASIS OF SOCIETY?

The basis is the economic system of society is characterized by capitalist private ownership of the means of production, by the exploitation and oppression of workers by capitalists, and by the capitalist form of distribution of products. The capitalist basis, like the slave and feudal bases, is intrinsically antagonistic, as it is founded on domination and subordination.

In his Dialectical and Historical Materialism, Stalin gives the following description of the capitalist relations of production, i.e., the basis of capitalist society: "The basis of the relations of production under the capitalist system is that the capitalist owns the means of production, but not the workers in production--the wage laborers--whom the capitalist can neither kill nor sell because they are personally free, but who are deprived of means of production and, in order not to die of hunger, are obliged to sell their labor-power to the capitalist and to bear the yoke of exploitation."* (J. Stalin, Problems of Leninism, Moscow, 1954, p. 738.)

The three volumes of Marx's Capital and a number of other profound works of his are devoted to a comprehensive analysis of the capitalist economic system, i.e., the capitalist basis. The state of the capitalist economic system in its imperialist stage of development was scientifically analysed in Lenin's Imperialism, the Highest Stage of Capitalism and other works, as well as in the works of Stalin.

The capitalist basis has long since become reactionary. The glaring contradictions it has engendered lead to its inevitable doom. The revolutionary class struggle of the proletariat against capitalism proceeds from the nature of the capitalist economic system, and neither decree nor violence on the part of the reactionary ruling circles of bourgeois states can eliminate this struggle.

As a result of the socialist revolution, the capitalist basis in Russia was replaced by the socialist basis, characterized by common socialist ownership of the means of production, the absence of exploitation of man by man, relations of co-operation and mutual help among the free toilers of the socialist society, and by the socialist form of distributing products according to the quantity and quality of labour.

Article 4 of the Constitution of the U.S.S.R. says that:

"The economic foundations of the U.S.S.R. is the socialist system of economy and the socialist ownership of the instruments and means of production, firmly established as a result of the liquidation of the capitalist system of economy, the abolition of private ownership of the instruments and means of production and the elimination of the exploitation of many by man." (Constitution, Fundamental Law) of the Union of Soviet Socialist Republics, Moscow 1954, p. 12)

The socialist economic system works on the following principle: "From each according to his ability, to each according to his work." (Constitution, Fundamental Law, of the Union of Soviet Socialist Republics, Moscow, 1954, p. 16)

In socialist society the relations of production fully correspond to the state of the productive forces, and the social character of production is bolstered by common ownership of the means of production.

The socialist basis is the most progressive basis. It has already demonstrated its vital force and superiority over the capitalist basis. In a brief historical period the Soviet Union has effected a stupendous leap from backwardness to progress. Under the leadership of the Communist Party, the Soviet people have built socialism and are successfully advancing along the road to communism.

The economic basis, i.e., the economic system of a given society, should be distinguished from the process of production. The process of production is the process of interaction between society and nature

while the basis is the sum total of definite production relations between people at a given historical period. The distinctive feature of the basis is that it serves society economically.

What does it mean to serve society economically? It means that in the production of material wealth not only productive forces are required but relations of production as well. Production and, consequently, the existence of society itself, is impossible outside these relations of production.

Every new basis supplanting an old, moribund basis, serves society better than the preceding one; the new basis offers greater opportunities and a vaster scope for the development of the productive forces.

The economic basis determines the social superstructure. Whatever the basis, such also, the superstructure.

WHAT, THEN IS THE SOCIAL SUPERSTRUCTURE? What social phenomena does it comprise?

"The superstructure is the political, legal, religious, artistic, philosophical view of society and the political, legal and other institutions corresponding to them." (J. Stalin, Marxism and Problems of Linguistics, Moscow 1955, p.7)

While it is the specific feature of the basis that it serves society economically, it is the specific feature of the superstructure that it serves society with political, legal aesthetic and other social ideas and corresponding political, legal and other institutions.

The superstructure, like the basis, bears a historical character. The definite superstructure of a given society, born of a definite economic basis of a given historical period, corresponds to that basis. The feudal basis has its feudal superstructure, its social, political and other views and institutions; the capitalist basis--its capitalist superstructure and the socialist basis--its own, a socialist superstructure corresponding to and conditioned by, this basis.

Consequently, it is a characteristic trait of the superstructure that it is the product of the one epoch during which a given economic basis exists and operates. The superstructure is, therefore, short-lived; it lasts but one epoch. The definite superstructure of a given historical period is eliminated and disappears with the extirpation of the given

basis.

The historical necessity of providing full scope for the development of the productive forces of society brings about the elimination of the old, outmoded superstructure and its replacement by a new superstructure.

It is another characteristic trait of the superstructure that its connection with production, with the process of production, is not direct, but indirect, through its economic basis. The changes in the process of production, in the productive forces and in the level of their development do not directly and immediately influence changes in the superstructure; they act indirectly, through the basis and the changes in the basis.

Dependent on, and in conformity with, the changes in the state of the productive forces, there comes, in the final analysis, a radical change in men's relations of production, a revolutionary replacement of the economic basis. This radical change in the basis leads to a radical change in the social superstructure.

In analyzing the process of the revolutionary replacement of the moribund basis and its corresponding superstructure by a new basis and superstructure, Marx wrote: "...At a certain stage of their development, the material productive forces of society come in conflict with the existing relations of production, or what is but a legal expression for the same thing, with the property relations within which they have been at work hitherto. From forms of development of the productive forces these relations turn into their fetters. Then begins an epoch of social revolution. With the change of the economic foundation the entire immense superstructure is more or less rapidly transformed." (Karl Marx and F. Engels, Selected Works, Vol. I, Moscow 1955, p. 363.)

Consequently, the change in the social superstructure lags somewhat behind the change in the productive forces. This sequence is subject, firstly to the nature of consciousness, ideas, views and ideology, that are a reflection of social being, and, secondly, to the reactionary activities of society's obsolescent forces on guard over the old, moribund ideas, views and institutions.

In class society the superstructure is of a class nature. It is created by the ruling class and serves the needs of the ruling class only, and not those of the whole of society. In this respect the superstructure differs, say, from language, which serves the various classes of a given

society, which serves alike the bases of various societies and is created by the entire nation, by the given people, and not by one or another class. The language of the Russian people and the languages of the other peoples of the U.S.S.R. served both the capitalist basis and all the classes of bourgeois society, just as they now splendidly serve the socialist basis, socialist culture and all the aspects of life of socialist society.

It is the most important feature of the superstructure that being a product and reflection of the definite basis of a given historical period it exerts a retroactive influence on the basis that created it.

Unlike the vulgar materialist, the Economists, Mensheviks, Kautskyites, Right-wing Socialists and other followers of the theory of spontaneity, of automatic development, of the peaceful growing of capitalism into socialism, Marxists have always recognized the active role of the superstructure, the great mobilizing, organizing and transforming role of advanced ideas and progressive social and political institutions in the life and development of society.

The superstructure is not passive or neutral to the fate of its basis, to the fate of the classes and the social system. Once begotten, the superstructure becomes a powerful active force that assists its basis to take shape and consolidate. The superstructure helps the new system, the progressive forces of society, to finish off the old basis, the old classes and reactionary forces. "...The superstructure is created by the basis precisely in order to serve it, to actively help it to take shape and consolidate itself, to actively fight for the elimination of the old moribund basis together with its old superstructure. The superstructure has only to renounce this role of auxiliary, it has only to pass from a position of active defense of its basis to one of indifference towards it, to adopt an equal attitude to all classes, and it loses its virtue and ceases to be a superstructure." (J. Stalin, Marxism and Problems of Linguistics, Moscow 1955, p. 9-10)

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THUS, THE SUPERSTRUCTURE PLAYS AN ACTIVE PART IN SERVING THE BASIS THAT CREATED IT.

The active nature of the superstructure can manifest itself in the defense and protection of an obsolescent basis, or social system and its ruling class. This is precisely the function performed by the super-

structure in present-day capitalist society, where it shields from ruin the utterly decayed, outmoded capitalist basis. It plays a reactionary role by retarding the development of the productive forces.

As an economic system, capitalism has completely outlived itself. The capitalist relations of production have long since become a major hindrance to the development of the mighty productive forces. Periodic economic crises and devastating imperialist wars are born of the very nature of the capitalist system and manifest the reactionary substance of the capitalist basis.

The reactionary, capitalist superstructure and above all, the bourgeois state and bourgeois political and other views, ideas and theories are called upon to defend--and actually do defend--the capitalist basis; they protect it, and act as its apologists.

Along with the transition from pre-monopoly capitalism to monopoly capitalism, i.e., imperialism, there was the transition from bourgeois democracy to imperialist reaction. It is a distinctive feature of present-day capitalism that it even renounces the curtailed, decayed, false and corrupt bourgeois democracy and goes over to fascism to an overt terrorist dictatorship over the working people. By means of unconcealed terror, violence and predatory wars, the reactionary bourgeoisie seeks to preserve the foundations of capitalism, to safeguard against collapse the capitalist basis and the whole of bourgeois society. This precisely is the essence of the reactionary role of the bourgeois superstructure.

In his Collapse of the Second International, Lenin wrote that all oppressing, exploiting classes need two social functions to safeguard their domination: the functions of hangman and priest. The hangman, i.e., all the ideologists of the bourgeoisie, including its Right Wing socialist lackeys, is to paint for the oppressed masses delusive prospects, to poison and deprave their spirit, to reconcile them to the existing bourgeois system, to undermine their determination in the struggle against capitalism and their revolutionary spirit; to destroy their confidence in their own strength and ability to overthrow the capitalist power, to affect a socialist revolution and build a society where there is no exploitation and oppression. Such is the social function of the bourgeois superstructure. Its active role consists in defending by all possible means the economic system of capitalism the system of wage slavery and unrestrained exploitation of the working people.

The socialist superstructure that arose in the U.S.S.R. on the socialist basis, plays a fundamentally different role.

The socialist superstructure and, above all, the socialist state led by the Communist Party, has done everything to finish off the old basis and the exploiting classes, and to ensure the triumph of the new, socialist basis and the new social system.

"In the course of the past thirty years," Staline wrote, "the old, capitalist basis has been eliminated in Russia and a new, socialist basis has been built. Correspondingly, the superstructure on the capitalist basis has been eliminated and a new superstructure created corresponding to the socialist basis. The old political, legal and other institutions consequently, have been supplanted by new, socialist institutions." (J. Stalin, Marxism and Problems of Linguistics, Moscow 1955, p. 8)

The socialist superstructure performs the functions of effectually defending, consolidating and further developing the socialist basis.

Hence, the general historical law manifested in the determining role of the basis with regard to the superstructure, and in the active role of the superstructure with regard to the basis, remains fully valid in socialist society. The socialist superstructure relies on its own, socialist basis and is determined by it.

The dictatorship of the proletariat and the Communist Party as the guiding force in its system, arose before the socialist basis and constituted a decisive factor in its victory. The dictatorship of the proletariat emerged before the establishment of the socialist economic system, in the process of breaking up the capitalist relations of production, the capitalist basis. This reveals a peculiar feature of the socialist revolution as distinct from the bourgeois revolution, a peculiar feature of the formation of the socialist basis as distinct from the formation of the capitalist basis, and, consequently, the special role played by the socialist state as the major political superstructure in the task of creating a socialist basis.

The capitalist economic basis matured spontaneously in the bosom of feudalism. This was possible since both capitalism and feudalism are based on private ownership of the means of production. The origination of the socialist economic basis is quite another matter. The socialist basis could not, and cannot, arise spontaneously in the bosom of capitalism, since it represents its absolute antithesis, its most radical and revolu-

tionary negation.

It is only the material productive forces necessary for the creation of the socialist basis that arise spontaneously within capitalism. Socialism would have been impossible without the vast socialization of labour achieved in capitalist society on a national and world-wide scale. But this socialization of labour is effected in capitalist society on the basis of capitalist private property. It is but one of the material prerequisites of socialism, of the socialist basis. The emergence of this basis, however, presupposes socialist revolution, forcible expropriation of the expropriators, and establishment of the dictatorship of the proletariat as its decisive prerequisite. The dictatorship of the proletariat is the decisive political means of creating and shaping the socialist economy and ensuring its triumph.

The Soviet state was only able to perform its momentous role of eliminating the capitalist basis and founding the socialist economy, because it leaned upon the economic law that the relations of production must necessarily correspond to the state of the productive forces. The working class required the socialist state to bring the relations of production into correspondence with the level of the productive forces, to promote the formation of the socialist basis, and eventually, after the triumph of this basis, to further its consolidation and development.

The socialist state, the socialist superstructure as a whole, performs this specific mission because the socialist system is based on common, socialist ownership and planned national economy. The socialist economic system is incompatible with elemental and spontaneous processes. In the capitalist system, based on private ownership of the means of production, economic laws operate spontaneously, while the socialist system proceeds from the conscious application of objective economic laws in the planned and centralized management of the whole of the national economy. It is the socialist state that performs the guiding and organizing function. K

But, in spite of this specific function of the superstructure under socialism, in the final analysis the determining role of the basis in relation to the superstructure is also preserved. The socialist state developed and changed its form and functions in conformance to the changes taking place in the economic basis of Soviet society. The strengthening work for the consolidation of the socialist consciousness and the new, socialist outlook of tens of millions of people.

When Marxists speak of the superstructure they mean the sum total of

its component elements--the political, legal, aesthetic and philosophical views, and their corresponding institutions.

The formation and consolidation of the complex and vast socialist superstructure was by no means accomplished with the establishment of Soviet power. It continued throughout the past three decades. Even now, during the period of transition from socialism to communism, the Communist Party, the Soviet state and all the progressive people of socialist society, have to combat the survivals of capitalism in the minds of Soviet people, the non-socialist attitude towards labour, the remiss attitude towards socialist property, and the remnants of old customs and bourgeois morals still alive among the backward sections of the public.

This testifies to the fact that consciousness lags somewhat behind social being and the progress of material life, including the socialist basis.

When defining the superstructure, Marxism holds political, legal and other institutions arise from, and depend on, these political, legal and other views. This conforms to the historical course of events.

In the process of social development there first arise new, advanced political, legal and other social views that reflect the requirements of the material life of society, and then appear their corresponding institutions. The contradictions of the capitalist mode of production and the attendant class struggle, as well as the development of scientific thought, nurtured the Marxist idea, the Marxist teaching of the dictatorship of the proletariat; upon gripping the masses, this idea eventually became a material force, and then, as a result of the socialist revolution, the dictatorship of the proletariat and its institutions were established.

The superstructure is always framed by the conscious effort of people, as distinct from the basis, which (before socialism) originated and took shape spontaneously.

As is known, the old, obsolescent superstructure taken as a whole, is torn down in periods of revolution, when the conscious effort of revolutionary masses takes the place of spontaneous social development.

The revolutionary class consciously destroys and replaces the old

superstructure by a new superstructure, founded on the new rising basis. The individual components of the new superstructure (the new political, legal and philosophical views, the advanced ideas) take shape even before the revolution. But the new superstructure--the sum total of the political, legal and other ideas and their corresponding political, legal and other institutions--comes into being precisely at the time of revolution. Lenin's article Against the Boycott says: "A high appreciation of revolutionary periods in the development of humanity is something that follows logically from the sum total of Marx's views on history. It is in such periods that the numerous contradictions that slowly accumulate in periods of so-called peaceful development become resolved. It is in such periods that the direct role of the various classes in the determination of the forms of social life manifests itself with the greatest force, and that the foundations are laid for the political "superstructure," which then for a long time continues to persist on the basis of the new relations of production." (V.I. Lenin, Marx-Engels-Marxism, Moscow, 1953, pp. 262-63)

Whilst breaking up the old, bourgeois relations of production in the course of the socialist revolution in Russia, the working class, led by the Communist Party, laid the foundations of the new political superstructure, and set up and consolidated the dictatorship of the proletariat. The new political superstructure, the Soviet state, was the decisive lever in refashioning the old economy and creating a new, socialist economy.

Socialist production relations are a real and sound basis for the socialist superstructure--the political, legal, and philosophical and aesthetic views and their corresponding political, legal and other institutions of socialist society.

Some lecturers and authors of popular Marxist pamphlets usually unreservedly treated all forms of social consciousness including all spheres of science, as a part of the superstructure. The superstructure was often enough conceived too broadly and was erroneously thought to include the language. This was a gross mistake which had its sad consequences in linguistics.

Firstly, all sciences, both natural and social, have it in common that they are intended to provide us, and do provide us, with the objective truth existing independently of man and mankind. Both natural and social sciences are called upon to discover the laws governing processes from ignorance to knowledge, from less complete truths to truths more complete, and from relative to absolute truths. Hence, there is continuity and interconnection in the development of all sciences, and every

Science

new generation of scientists carries on the work of their predecessors. This law-governed process is inherent in equal degree in all spheres of knowledge. By virtue of this, the specific relations of all natural and social sciences to the basis and superstructure, differ from those of other forms of social consciousness. When defining this common trait we must, however, bear in mind the difference between natural and social sciences.

The difference in the objects of study determines the difference between social and natural sciences, their different relation to production the basis, the superstructure, and the classes. Should geometrical laws have affected class interests, Lenin wrote, they would have been contended. If. But they, these axioms, along with many mechanical, physical and chemical laws of nature do not generally affect class interests directly, and can, therefore, serve various modes of production and opposing aims. This is not the case with social sciences. Here the object of study--property relations, problems of labour and wages, problems of state and law, etc. --directly affects class interests.

Social sciences are the theoretical enunciation of the interests of one or another class, the exposition and substantiation of its political ideology. Thus, bourgeois political economy, bourgeois sociology and theories of the state and law, express the political ideology of the bourgeois class. They originate on the capitalist basis and are, therefore, a component of the bourgeois superstructure. It is not for any scientific knowledge of objective economic or other social laws, however, that they form part of the superstructure; bourgeois political economy, sociology and theories of the state are ignorant of these objective laws. They form part of the superstructure, or are treated as its part, because they express the political, legal and philosophical views of the bourgeoisie.

Marx and Engels, the ideologists of the working class, subjected to devastating criticism bourgeois political economy, bourgeois idealist sociology, and bourgeois political and legal theories. In their place, and opposing them, Marx and Engels created proletarian political economy, and dialectical and historical materialism.

Like any other social science, political economy is partisan from beginning to end, since it involves the cardinal and vital interests of the contending classes. In his preface to Capital, Marx wrote: "In the domain of Political Economy, free scientific inquiry meets not merely the same enemies as in all other domains. The peculiar nature of the material

14
it deals with, summons as foes into the field of battle the most violent mean and malignant passions of the human breast, the Furies of private interest. The English Established Church, e.g., will more readily pardon an attack on 38 of its 39 articles than on one/thirty-ninth of its income. Now-a-days atheism itself is sulpa levis, as compared with criticism of existing property relations." (K. Marx, Capital, Vol. I, Moscow 1954, p. 10).

Bourgeois political economy, Marx wrote could in a number of questions remain scientific only so long as the class struggle of the proletariat against the bourgeoisie was still latent and manifested itself in isolated cases. But when the practical and theoretical class struggle waged by the proletariat began to assume increasingly pronounced forms and threatened the bourgeois economy, "it sounded the knell of scientific bourgeois economy. It was thenceforth no longer a question whether this theorem or that was true, but whether it was useful to capital or harmful, expedient or inexpedient, politically dangerous or not. In place of disinterested inquirers there were hired prize-fighters; in place of genuine scientific research the bad conscience and the evil intent of apologetic." (K. Marx, Capital, Vol. I, Moscow, 1954, p. 15)

Lenin wrote that even a single word of the bourgeois professors of political economy cannot be trusted "when it comes to the general theory of political economy. For in modern society the latter is as much a partisan science as is epistemology. Taken as a whole, the professors of economics are nothing but learned salesmen of the capitalist class, while the professors of philosophy are learned salesmen of the theologians." (V.I. Lenin, Materialism and Empirio-Criticism, Moscow, 1952, p. 358.)

What Marx and Lenin said about bourgeois political economy fully applies to all of bourgeois sociology, historiography, and jurisprudence, which are nothing but pseudo-science. Bourgeois social science arises on the capitalist basis. It was called into being by it, and serves and protects its procreator.

Referring to bourgeois social science, Lenin wrote: "there can be no 'impartial' social science in a society based on class struggle. In one way or another, all official and liberal science defends wage slavery, whereas Marxism has declared relentless war on wage slavery. To expect science to be impartial in a wage-slave society is as silly and naive as to expect impartiality from manufacturers on the question whether workers' wages should be increased by decreasing the profits of capital." (V.I. Lenin, Selected Works, Vol. I Part I, Moscow 1952, p. 75)

Marxism, the genuine social science, was established by Marx and Engels and further developed by Lenin and Stalin. It is a scientific enunciation of the vital interests of the working class and constitutes its scientific political ideology. This partisan science came into being as a negation of the capitalist basis and its superstructure. Under socialism, Marxist political, legal, aesthetic and philosophical views constitute the superstructure on the socialist basis, which they reflect and for whose further consolidation and development they work. Marxism came into existence as a result of the progress of science, including philosophy, in the preceding period. It took the rational kernel (elements of the labour theory of value) of the classical English bourgeois political economy, the rational kernel of dialectics (the theory of development and change) from Hegel's philosophical system, etc. Meanwhile bourgeois social science, i.e., the various bourgeois social and political theories intended to protect and serve the capitalist basis, is eliminated along with the elimination of the latter.

As for special bourgeois economic and historical investigations, Marxism makes use only of their rich store of factual material, discarding the bourgeois pseudo-scientific theories intrinsically opposed to Marxism.

The discovery and utilization of the economic and sociological law affecting the interests of classes meet with the frenzied opposition of the reactionary forces, while the progressive classes promote the discovery and utilization of the objective laws of social development.

Social sciences are an instrument of class struggle. They cannot be neutral to classes and the class struggle, and being the embodiment and substantiation of political and legal views, of the ideology of classes, they perform functions of the superstructure.

It is different with natural science. A reflection of nature, a science treating of its forces and law-governed processes, it was born of the needs of producing material wealth, of developing technology and subjugating to society the elemental forces of nature.

Defining the connection between natural science and production, Engels wrote:

"The successive development of the separate branches of natural science should be studied. First of all, astronomy, which, if only on

account of the seasons, was absolutely indispensable for pastoral and agricultural peoples. Astronomy can only develop with the aid of mathematics. Hence this also had to be tackled. Further, at a certain stage of agriculture and in certain regions (raising of water for irrigation in Egypt) and especially with the origin of towns, big building structures and the development of handicrafts, mechanics also arose. This was soon needed also for navigation and war. Moreover, it requires the aid of mathematics and so promotes the latter's development. Thus, from the very beginning the origin and development of the sciences has been determined by production." (F. Engels, Dialectics of Nature, Moscow 1954, p. 247.)

Such was the case in the ancient world. The decline and fall of slave society was attended by a decline of culture and science. The early centuries of feudalism saw the persecution of scientific thought and the complete sway of religious obscurantism, theology and scholasticism. But, Engels wrote, after the darkness of the Middle Ages science is reborn with renewed vigour, and again it is to production that we owe this miracle.

Toricelli's hydrostatics arose out of the practical need to regulate mountain streams in Italy (Lombardy), from the need for hydrotechnical projects.

Genuine progress in electricity began after it had been already utilized in practice for the needs of production. It is the demand for technical progress that stimulates the development of natural sciences and engineering directly connected with production.

Hence it is one of the features of natural science--the sum total of knowledge of the laws of nature, of physical, chemical and other properties of things--that, distinct from the superstructure it is connected with production and its processes not only through the basis, but also directly.

Unlike medieval handicrafts, modern big industry both in capitalist and socialist society, is based on the conscious application of natural science, of the fruits of science. It could not live a single day without employing science. This is particularly true of such industries as machine-building, electrical engineering, the chemical war, coal-mining oil and other industries.