

THE HUMAN ESSENCE



The sources of science and art
by **GEORGE THOMSON**



THE HUMAN ESSENCE

THE HUMAN ESSENCE

The Sources of Science and Art

by

GEORGE THOMSON

The human essence is no abstraction inherent in each single individual. In its reality it is the ensemble of the social relations.

—*Marx*

CHINA POLICY STUDY GROUP
LONDON

To
THE CLARION SINGERS

Copyright © 1974 by George Thomson

Published by the China Policy Study Group, London

Second edition, revised 1977

ISBN 0 9502015 3 7

All rights reserved, including permission to translate or reproduce this book or portions thereof, except with the permission of the publishers, or by way of review.

MADE AND PRINTED IN GREAT BRITAIN BY
THE GARDEN CITY PRESS LIMITED
LETCHWORTH, HERTFORDSHIRE
SG6 1JS

Preface

This volume concludes the short introduction to Marxism which was begun in *From Marx to Mao Tse-tung* and continued in *Capitalism and After*. Taken together, the three volumes cover the political, historical and ideological aspects of the subject. The present volume differs, however, from the other two in one important respect.

As before, I have quoted freely from the Marxist classics in support of my argument, but the argument of the present volume is based to a much greater extent on the results of my own research. Starting from Marx's analysis of the labour-process, Lenin's theory of reflection, and Mao Tse-tung's theory of perceptual and rational knowledge, I endeavour to show that science and art are two interdependent forms of the organisation of social energy, both rooted in the labour-process. The argument ranges over a number of interrelated problems in linguistics, psychology, anthropology, musicology and literary criticism, not to mention philosophy and history. The quotations from the Marxist classics will enable the reader to judge how far my conclusions rest on their support, but obviously they can only be provisional.

The book covers a wide field, but it is still not wide enough, being restricted to Western science and art and to poetry and music among the arts. It is hoped that before long some scholar, or preferably a group of scholars, will give us a comprehensive history of Eastern and Western thought, revealing both as manifestations

of the truth that 'man's consciousness is determined by his social being'.

The reader who wishes to pursue the subject will find fuller references in my *Aeschylus and Athens*, *Marxism and Poetry*, and *The First Philosophers*. My thanks are due to Messrs Lawrence and Wishart for permission to use some material from those works.

The Clarion Singers, to whom the book is dedicated, are a choir of Birmingham workers, which has been active for over thirty years. It is from the work of such groups, in all countries, that the art of the future will arise :

Our country's strong, our country's young,
And her greatest songs are still unsung.
Out of the cheating, out of the shouting,
Out of the murders and lynching,
Out of the windbags, the patriotic spouting,
Out of the uncertainty and doubting,
It will come again,
Our marching song will come again,
Simple as a hit tune, deep as our valleys,
High as our mountains, strong as the people who
made it.

(Ballad for Americans)

Birmingham, 1974

GEORGE THOMSON

Abbreviations

(For full particulars of the works cited see pp. 112-14)

AD	Engels, Anti-Dühring.
C	Marx, Capital.
CPE	Marx, Contribution to the critique of political economy.
EPM	Marx, Economic and philosophical manuscripts.
GI	Marx and Engels, The German ideology.
GR	Marx, Grundrisse.
HF	Marx and Engels, The holy family.
LCW	Lenin, Collected works.
ME	Marx and Engels, Selected works.
MFE	Mao Tse-tung, Four essays on philosophy.
MSW	Mao Tse-tung, Selected works.
OR	Marx and Engels on religion.
PP	Marx, The poverty of philosophy.
SML	Stalin, Marxism in linguistics.
TSV	Marx, Theories of surplus-value.



Contents

Preface	v
Abbreviations	vii
I. <i>Man and Nature</i>	i
1 Life and Consciousness	2
2 Production and Consumption	3
3 Distribution	
II. <i>From Ape to Man</i>	10
1 Man and the Primates	2
2 The Second Signalling System	3
3 Co-operation	4
4 Speech and Thought among the Apes	
III. <i>Speech and Song</i>	21
1 Sentence Structure	2
2 Structure of the Labour Process	3
3 Song Structure	
IV. <i>Primitive Knowledge</i>	30
1 Perceptual and Rational Knowledge	
2 The Associative Complex	3
3 Grammatical Classes	4
4 Totemism	5
5 Ritual and Myth	6
6 Cosmological Myths	
V. <i>Natural Philosophy</i>	45
1 Theory and Practice	2
2 Mental and Manual Labour	3
3 Alienation	4
4 Materialism and Dialectics	5
5 Idealism and Metaphysics	

VI. <i>From Magic to Art</i>	59
1 Mythology and Art 2 Poetical Inspiration 3 Poetical Speech 4 Conscious Art	
VII. <i>Modern Science and Philosophy</i>	76
1 The Beginnings of Modern Science 2 The New Metaphysics 3 The New Dialectics	
VIII. <i>Form and Content</i>	88
1 Scientific and Artistic Creation 2 The Ritual Framework 3 Aeschylus 4 The Symphony and the Novel 5 Symphonic Form 6 Beethoven	
IX. <i>Intellectuals and the Proletariat</i>	101
1 Revolutionary Intellectuals 2 Science in the Service of Capital 3 Art as a Commodity 4 Ideological Remoulding 5 Bourgeois Morality and Culture 6 Illusion and Reality	
<i>References</i>	112
<i>Index</i>	115

*Man and Nature*1. *Life and Consciousness*

The materialist is one who recognises the priority of matter over mind. What is variously called mind, spirit, thought, consciousness is an activity of matter. Thought is a function of the brain, which is a material organism. Matter exists without thought, but there can be no thought without matter. Hence, matter is the only objective reality :

Matter is a philosophical category denoting the objective reality which is given to man by his sensations, and which is copied, photographed and reflected by our sensations, while existing independently of them. (LCW 14.130.)

Matter is in a state of perpetual motion and change. All change involves motion and all motion involves change :

Motion is the mode of existence of matter. Never anywhere has there been matter without motion, nor can there be. Motion in cosmic space, mechanical motion of smaller masses on the various celestial bodies, the motion of molecules as heat or as electrical or magnetic currents, chemical decomposition and combination, organic life—at each given moment each individual atom of matter in the world is in one or other of these forms of motion, or in several forms at once. All rest, all equilibrium is only relative, and has meaning only in relation to one or other definite form of motion. (AD 70.)

This is true not only of natural phenomena but also of human society and thought. All social and mental processes are subject to the same fundamental laws of motion and change. The study of these laws is what we call dialectics :

Dialectics is nothing more than the science of the general laws of motion and development of nature, human society and thought. (AD 158.)

Amid the welter of innumerable changes taking place in nature, the same dialectical laws of motion are in operation as those which in history govern the apparent fortuitousness of events, the same laws as those which similarly form the thread running through the history of the development of human thought and gradually rise to consciousness in the mind of man. (AD 15.)

The laws of dialectics rest on the principle of contradiction. All motion, all change, consists in the development of internal contradictions inherent in the nature of things :

As soon as we consider things in their motion, their change, their life, their reciprocal influence on one another, then we immediately become involved in contradictions. Motion itself is a contradiction. Even simple mechanical change of place can only come about through a body being at one and the same moment both in one place and in another place, being in one and the same place and not in it. The continuous assertion and simultaneous solution of this contradiction is precisely what motion is. . . .

And if simple mechanical change of place contains a contradiction, this is even more true of the higher forms of motion of matter, and especially of organic life and its development . . . Life is therefore also a contradiction which is present in things and processes themselves, and which constantly asserts and resolves

itself; and as soon as the contradiction ceases, life too comes to an end, and death steps in. (AD 135-36.)

Every organic being is at each moment the same and not the same; at each moment it is assimilating matter drawn from without, and excreting other matter; at each moment the cells of its body are dying and new cells are being formed; in fact, within a longer or shorter period the matter of its body is completely renewed and replaced by other atoms of matter, so that every organic being is at all times itself and yet something other than itself. (AD 28.)

Thus, dialectics may be described as the study of the conflict of opposites inherent in the nature of matter :

The unity of opposites is the recognition (discovery) of the contradictory, *mutually exclusive*, opposite tendencies in *all* phenomena and processes of nature (*including* mind and society). The condition for the knowledge of all processes of the world, in their real life, is the knowledge of them as a unity of opposites. Development is the 'struggle' of opposites. (LCW 38.359.)

Whereas the development of internal contradictions is a universal feature inherent in all forms of matter, each particular form of motion and change has its own particular contradiction, and it is these that underlie the distinction between the different branches of science :

The contradiction peculiar to a certain field of phenomena constitutes the object of study for a specific branch of science. For example, positive and negative numbers in mathematics; action and reaction in mechanics; positive and negative electricity in physics; dissociation and combination in chemistry; forces of production and relations of production, classes and class struggle, in social science; offence and defence in military science; idealism and materialism, the metaphysical outlook and the dialectical outlook, in philosophy; and so on—all these are the

objects of study in different branches of science, because each branch has its own particular contradiction and particular essence. (MSW 1.320.)

The transition from inorganic to organic matter was effected when certain albuminous (protein) substances developed a form of motion which may be described as self-renewal :

Life is the mode of existence of albuminous substances, and this mode of existence consists essentially in the constant self-renewal of the chemical constituents of these substances. (AD 93.)

The albuminous body renews itself by absorbing certain substances from its environment and expelling others previously absorbed—that is, by nutrition and excretion. This continuous interchange of matter between the organism and its environment is what life is. When it ceases, the organism dies. All the distinctive features of living matter are derived from this source :

From the exchange of matter that takes place through nutrition and excretion as the essential function of albumen, and from its peculiar plasticity, proceed also all the other most simple characteristics of life : response to stimuli, which is directly included in the interaction between the albumen and its food; contractility, which is shown by very low forms in the consumption of food; and the possibility of growth, which in the lowest forms includes propagation by fission, internal movement, without which neither the consumption nor the assimilation of food is possible. (AD 95.)

No less momentous than the transition from non-living to living matter was the emergence out of the animal world of man. Man differs from the animals in that in him the exchange of matter between himself and his environment is brought under his conscious control. The animals are conscious of their environment, but only passively, as part of it. Man is conscious of it as

something separate from himself, as the *object* of his activity in the labour of production; and hence, being conscious of nature as object, he is also conscious of himself as *subject* :

The animal is immediately identified with its life activity. It does not distinguish itself from it. It is its life activity. Man makes his life activity itself the object of his will and consciousness. He has conscious life activity. (EPM 75.)

This contradiction between 'the subject, man, and the object, nature' (CPE 190) underlies all human activities, being inherent in the labour-process :

Labour is, in the first place, a process in which both man and nature participate, and in which man of his own accord starts, regulates and controls the material reactions between himself and nature. He opposes himself to nature as one of her own forces, setting in motion arms and legs, head and hands, the natural forces of his body, in order to appropriate nature's productions in a form adapted to his wants. (C 1.177.)

Thus, man differs from the animals in that his action on nature is such as to bring it under his conscious control :

The animal merely *uses* external nature and brings about changes in it merely by his presence. Man by his changes makes nature serve his ends, *masters* it. (ME 3.74.)

The labour of production involves the conscious organisation of man's action on nature; and hence also, being co-operative, it involves the conscious organisation of his relations with his fellow men. In a word, it is *social* :

In production men act not only on nature but on one another. They produce only by co-operating in a certain way and mutually exchanging their activities. In order to produce they must enter into definite

connections and relations with one another, and it is only within these social connections and relations that their action on nature, production, takes place. (ME 1.159.)

From this it follows that the human consciousness is not merely a relationship between the individual and his natural environment; it is, even in its simplest forms, a *social* image—the relation between society and its environment as reflected in the individual. The conceptual framework in which man orders his sense impressions has taken shape out of his social relations. As Marx said :

It is not the consciousness of men that determines their being, but, on the contrary, it is their social being that determines their consciousness. (ME 1.503.)

2. *Production and Consumption*

In the labour of production man opposes himself to his environment, brings it under his conscious control, and so produces his means of subsistence. There is an initial movement from man to nature, from subject to object, and this is followed by a reflex movement from nature to man, from object to subject. By consuming what he has produced he reproduces the bodily energy which he has consumed in production, and at the same time, by successfully completing the process, he enhances his mental capacity to control it :

By thus acting on the external world and changing it, he at the same time changes his own nature. He develops his slumbering powers and compels them to act in obedience to his sway. (C 1.177.)

Of these two movements, the first is from the beginning a conscious one, because it involves the use of tools. Before he can make a tool, a man must be conscious of the purpose for which it is to be used; and before he can use it effectively, he must have formed in his con-

sciousness an idea or image of the object to be produced. This is the essential difference between man's action on nature and that of the animals :

A spider conducts operations that resemble those of a weaver, and a bee puts to shame many an architect in the construction of her cells. But what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality. At the end of every labour-process we get a result that already existed in the imagination of the labourer at its commencement. He not only effects a change of form in the material on which he works, but he also realises a purpose of his own, which gives the law to his *modus operandi*, and to which he must subordinate his will. (C 1.178.)

This preconceived image has two aspects. On the one hand, it embodies the knowledge, acquired from previous practice in production, which enables the producer to conduct the process in such a way as to achieve his purpose. This is its objective or cognitive aspect. On the other, it embodies the desire, derived from previous practice in consumption, which provides the will to produce. This is its subjective or affective aspect. In these two aspects of the labour-process—the purpose and the will—we may recognise the germ of the distinction between science and art.

3. *Distribution*

Distribution is a social act necessitated by the division between production and consumption. Among the animals there is no distribution, just as there is no production, only simple appropriation, which includes consumption. In primitive society distribution is the link which unites production with consumption. The members of the community consume what they have produced by their collective labour after dividing it into

equal shares. The shares are necessarily equal, because the concerted efforts of the whole community are required to maintain it at the bare level of subsistence. There is no surplus.

The development of surplus production, rendered possible by the use of better tools, provides the basis for divisions of labour. Separate groups within the community specialise in different kinds of labour and contribute their products to the common fund, from which they are distributed to the individual producers. As labour becomes more productive, it becomes less collective. The worker can now produce a surplus for himself. Accordingly, he draws a distinction between his necessary labour, which is still performed for the community, and his surplus labour, which he performs for himself; and he claims the right to dispose of his surplus product as he chooses. In this way his product becomes a commodity. Production for use is superseded by production for exchange.

These developments culminate in the emergence of a qualitatively new division of labour—the division between mental and manual labour. A section of the community is exempted altogether from manual labour in order that it may devote itself to the technical and organisational tasks involved in the further development of production. Taking advantage of their control over the means of production, these organisers establish themselves eventually as a ruling class.

Just as primitive society is based on the production of use-values, so primitive thought is concrete, qualitative, subjective. The faculty of abstract thinking, which distinguishes civilised man from the savage, was developed in response to the development of commodity production. As an object of consumption, a commodity is a use-value; as an object of exchange, it is an exchange-value. In order that it may be exchanged, it must be divested, in the minds of the producers, of its concrete, qualitative properties and treated as a purely quantitative abstraction. The handling of this con-

tradition between use-value and exchange-value involves a mental operation which men have carried out successfully, though without any theoretical understanding of the process, ever since they first took their goods to market; and in this way, through the social practice of commodity exchange, they acquired the capacity to distinguish between the concrete and the abstract, the particular and the general, the phenomenal and the essential, the subjective and the objective. This capacity was a necessary prerequisite for the development of scientific thinking.

At the same time, however, with the development of exchange, the producer surrenders control over his product. He no longer knows what becomes of it. The link between production and consumption is lost sight of in the market. The purpose for which he produces is constantly contradicted by the result. Hence the 'false consciousness' of commodity-producing society, which inverts the relation between cause and effect, giving rise to philosophical idealism, metaphysics, and other forms of unscientific thinking. Instead of regarding matter as primary and mind as secondary, the idealist asserts that mind is primary and matter secondary; instead of regarding motion as absolute and rest as relative, the metaphysician asserts that rest is absolute and motion relative. The truth is turned upside down.

Science is the form in which man organises his cognitive experience; art is the form in which he organises his affective experience. The terms 'cognitive' and 'affective' mark the distinction between thinking and feeling. In primitive society there is neither science nor art, only magic. Science and art, as we know them, presuppose the development of commodity production, the antithesis between mental and manual labour, and the division of society into classes.

*From Ape to Man*1. *Man and the Primates*

In general, the various forms of animal life have evolved over an immense period of time by natural selection, through which they have become adapted, with varying degrees of success, to different environments and to successive changes of environment. Not only do climatic conditions differ in different parts of the earth, but in all parts they have undergone a long series of more or less profound changes. No species of animal can ever be perfectly adapted to its environment, because the environment changes; and a species which has adapted itself exceptionally well to the conditions of a given period may later be incapacitated for that very reason, while other species, less highly specialised, increase and multiply.

Man is one of the primates, the highest order of animals, which includes, besides him, the apes and monkeys. Other mammalian orders are the carnivora, including the dog and cat, and the ungulates, including the horse and cattle. The earliest mammals lived in trees. From this ancestral stock the ungulates and carnivora branched off by adapting themselves in various ways to living on the ground. Losing the finer articulation of their limbs, they learnt to stand firmly and move rapidly on all fours, and they developed various offensive and defensive organs, such as horns, hoofs, spines, tusks, teeth for chewing grass or for tearing flesh, and long snouts for smelling at a distance. Meanwhile, another group, ancestors of the primates, remained in

the trees and so preserved on the whole the primitive mammalian structure. Their conditions of life required good eyesight rather than a keen scent, agility and cunning rather than speed and strength, and their diet of fruit and leaves made no great demands on the teeth. The snout dwindled, while the eyes developed full stereoscopic vision. The claws shrank into flattened nails imbedded in sensitive pads; the digits became more flexible, with the thumb and big toe moving in opposition to the others, so that they could grasp and handle small objects; and finally, in keeping with these developments, the brain became larger and more complex. Since the function of the brain is to control the other bodily organs in their interaction with the external world, it is the one organ whose growth is free from the risks of over-specialisation. Thus, the primates evolved in such a way as to become more, not less, adaptable.

Man's nearest living relatives are the anthropoid apes, from which he differs in his upright posture and his larger brain. It is believed that the first step in the differentiation of man was taken when some of the primates abandoned their arboreal habits and took to living on the ground. This is what the first ancestors of the carnivora and ungulates had done millions of years before; but, when man followed their example, he did so at a far higher evolutionary level, and hence the consequences of the change were entirely different. He was already, as we have seen, in possession of a better brain than any other animal; and in learning to walk on the ground he committed himself to a way of life in which his only chance of survival lay in further development of his brain.

The animals are part of nature. The interaction that takes place between them and their environment is entirely passive. It is true that they react on nature, as when the flora of some region is transformed by the depredations of grazing herds of cattle; but the animals themselves are no more conscious of what they are

doing than the rivers which carve out valleys in their course. Beehives, birds' nests and beavers' dams are no exception. Such activities are instinctive forms of adaptation biologically inherited.

Nevertheless, there are differences of degree between the lowest animals and the highest. They are more or less adaptable. The non-human primates owe their superiority over the other animals to the fact that, thanks to the relatively large size of the brain, rendered possible by the lack of specialisation in the other organs, they became of all animals the most adaptable. They were able to evolve in this way because they lived in trees, which provided them with food ready to hand and a refuge from their enemies.

When man's first ancestors abandoned these natural advantages, there opened a new stage in the evolution of organic life, in which the relation between animal and nature underwent a qualitative change. In respect of teeth, arms, legs, they were utterly defenceless; and, had they been dependent on them, they would certainly have perished. But they were endowed with a brain, which, though smaller than ours, was larger than those of the anthropoid apes; and moreover, thanks to their erect posture, they had a pair of hands, which, guided by the brain, enabled them to adapt nature consciously to their needs instead of merely adapting themselves to natural conditions.

Having thrown the whole weight of his body on his feet, man lost the prehensility of his toes, but, with his hands free, his fingers became capable of the most delicate movements. This was a gradual process. The first effect of the new posture was to relieve the pressure on the jaws by transferring from them to the hands such tasks as tearing and crushing food and other objects. Accordingly, the jaws began to contract, thus leaving room for further expansion of the brain; and, as the brain expanded, so it became capable of subjecting the hands to an ever closer control.

It is to this parallel development of hand and brain

that we must look for the physiological origin of man's two cardinal characteristics—the use of tools, and speech.

The non-human primates can handle natural objects, such as sticks and stones, and even adapt them slightly to some immediate purpose; but there is a qualitative difference between such manipulated objects and even the crudest human artefacts, such as stone scrapers, mallets, axes and awls. A tool is a product of labour designed, not for consumption, but for production (GR 492). Its manufacture demands, therefore, a higher degree of purposeful activity than its manipulation as an instrument of production; for, whereas its manipulation is directed towards a particular product, its manufacture is directed towards a particular kind of production.

From this it may be inferred that the use of tools involves a high degree of intelligence, or rather a new sort of intelligence, inseparable from speech. Now, the motor organs of the hand and the organs of speech are controlled from two adjacent areas of the brain. For this reason we commonly find what is called a 'spread' from one to the other. Children learning to write roll the tongue, or even pronounce the words aloud, in the concentrated effort necessary to control the movements of the hand; and conversely, they tend to gesticulate more freely than adults when they are talking. These are primitive characteristics. Among savages, as also among the apes, gesticulation is lavish and elaborate. In some primitive languages it is so closely bound up with speech that words are hardly capable of conveying their full meaning without the appropriate gesture. Indeed, we have only to watch ourselves talking to see that the 'spread' has never been eliminated. From this we may infer that the manual operations of early man were accompanied to a greater or lesser degree, in proportion to their complexity, by a reflex action of the vocal organs. Later, these vocal movements were developed consciously as a means of

directing the manual operations; and finally they emerged as an independent medium of communication, supplemented by reflex movements of the hands.

2. *The Second Signalling System*

In the course of evolution the various forms of animal life have adapted themselves structurally and functionally to their changing natural environment; and the highest of them are marked off from the rest by the size and complexity of the brain, which enables them to react to their environment with greater versatility and efficiency.

The earliest invertebrates made their appearance on earth more than 500 million years ago; the fishes, nearly 400 million; the reptiles, about 250 million; the mammals, less than 200 million; man, about 3 million. We see from these figures that the rate of accumulation of new characters increases as we ascend the evolutionary scale, at the head of which stands man. His appearance is marked by an increase in the pace of evolution so rapid that it can only be explained as the result of a qualitative change. It was shown by Pavlov, in his work on conditioned reflexes, how this change can be analysed in terms of the actual functioning of the brain.

A reflex, as Pavlov used the term, is a reaction to a stimulus. When food is admitted into our mouths, it is enveloped in saliva, which lubricates it and so makes it easier to swallow. By a series of systematic observations carried out on dogs he showed that the contact of food with the mouth starts a chain of movements passing along the nerve fibres to the brain and back to the mouth, where it sets in motion the salivary glands.

Reflexes are conditioned or unconditioned. The example just given is unconditioned. An unconditioned reflex is inborn. The conditions requisite for its development are present in every normal individual of the species from birth. A chick does not learn to peck; a

child does not learn to suck. These are unconditioned reflexes.

The saliva can be made to flow without actual contact. As we know, the sight or smell of food is sometimes enough to 'make the mouth water'. A reflex of this kind is conditioned. There are certain sights or smells which we have learnt to associate with food. What do we mean by 'learn'? One of Pavlov's dogs was fed at regular intervals, and, after it had become accustomed to the procedure, a bell was rung just before each feeding-time. It was then found that the salivation took place at the sound of the bell. The stimulus had been transferred to the sound in accordance with the conditions created by the experiment. In the next stage, the bell was sounded but no food was given, and in time the salivation ceased. It had been inhibited: that is, a contrary stimulus had been set up, corresponding to the new conditions, and the reflex previously established was suppressed. Pavlov showed that such conditioned reflexes did not operate in the absence of a properly functioning cortex.

The aggregate of unconditioned and conditioned reflexes in a given animal constitutes an organic unity of the type which Pavlov called the first signalling system. This is the system characteristic of the animals, more or less developed according to their evolutionary level. In man it became so complex as to create the basis for reflexes of an entirely new kind, which, operating together with the rest, constitute the second signalling system.

One of Pavlov's pupils conducted the following experiment. An electric current was applied to a child's finger. The child withdrew its finger. The procedure was repeated. After a time, before the current was applied, a bell was rung; and when this had been repeated, the child withdrew its finger at the sound of the bell. Next, instead of ringing the bell, the experimenter uttered the word 'bell'; and the child withdrew its finger instantly at the sound of the word. Then,

instead of uttering the word, he showed it written on a card; and the child withdrew its finger at the sight of the word. Finally the child was made to withdraw its finger at the mere thought of a bell.

This experiment began with an unconditioned reflex—the withdrawal of the finger in response to the stimulus of the electric charge; and it proceeded to a conditioned reflex—the withdrawal of the finger at the sound of the bell. These were simply passive responses to external stimuli, both falling within the limits of the first signalling system. But, when the child reacted to the sound, sight and thought of the *word*, the responses were of a different order. In these cases, through the use of the word, the child has generalised actively. The word is not merely another signal; it is a 'signal of signals'. Responses of this type belong to the second signalling system, in which the characteristic stimulus is not merely an objective natural phenomenon acting on the sense organs but an artificial sound invested socially with a subjective value. There is nothing in the sound of the word 'bell' which requires that it should convey that meaning and no other; on the contrary, there is a different word for 'bell' in every language. And, just as its form is socially determined, so too is its content. The word 'bell' signifies, besides the sound of a bell, the shape of a bell and the function of a bell, and not only of this or that bell, but of all bells. It signifies the sum-total of common properties abstracted from the concrete qualities of particular bells. In brief, it denotes a *concept*.

The work of Pavlov and his school provided an experimental proof of Lenin's theory of reflection :

For every scientist who has not been led astray by professorial philosophy, as well as for every materialist, sensation is indeed the direct connection between consciousness and the external world; it is the transformation of the energy of external excitation into the fact of consciousness. (LCW 14.51.)

3. *Co-operation*

The evolution of the second signalling system is clearly connected with the progressive expansion of the brain, which, as we have already noted, may be observed among the higher mammals. This point is confirmed by further evidence.

Most of the ungulates grow very fast. The carnivora, on the other hand, are born helpless and remain dependent for several months. Among the primates, the orang-utang spends the first month on its back, then slowly learns to walk, becomes independent at three years, and full-grown at ten or eleven. The human baby can seldom walk before the end of the first year.

Not only do the primates mature later than the lower animals, but of all their bodily organs the latest to mature is the brain. In man this disparity is even greater. His brain puts on weight after birth over a longer period and more rapidly than any other part of the body, and the increase is due mainly to the growth of a network of fibres connecting the cells of the cortex, especially the two areas which control the hands and fingers and the tongue and lips. These areas are very large in proportion to the other motor areas, and much larger than the corresponding areas in the non-human primates. It is during the period of immaturity, when this network is being formed, that the most enduring of the conditioned reflexes are established. We have already remarked that, apart from his brain, early man was almost destitute of bodily defences, and to this we must now add the exceptionally prolonged period during which the adults were occupied in rearing helpless infants. This condition must have both necessitated and assisted the development of collective labour, involving the use of tools and speech.

The formation of conditioned reflexes is a description in physiological terms of what we call learning. A young animal learns by imitation. It clings to its mother, follows its mother, copies its mother. This capacity is

unconscious, and it is limited, for the most part, to the period of immaturity. When full-grown, the animal is much slower to learn even simple things, and many things which it could have learnt earlier are beyond it. But to this rule there is one important exception. Monkeys are consciously imitative. This development among the primates was no doubt assisted by their habit of living together in bands, composed usually of the females with their offspring.

Conscious imitation is the first step towards co-operation. This can be seen in children. After imitating the action of an adult for its own sake, as though it were an end in itself, the child comprehends in time the purpose of the action, modifies its imitation accordingly, and so learns to co-operate. It might be supposed, therefore, that, after the faculty of conscious imitation had been developed, co-operation would follow almost as a matter of course. But this is not so. Apes and monkeys are great mimics, but, except casually and ineffectually, they do not co-operate.

From this we may infer that the development of co-operation was closely connected with the use of tools and speech. Without co-operation there could have been no speech, which is its medium. What, then, was the function of co-operation? The answer is, quite simply, that many brains are better than one. Having advanced so far in developing the brain as to adopt the upright posture, our ape-like ancestors entered on a new stage, in which their only prospect of survival lay in the further development of that organ. They had to go forward or perish; and, as the archaeological record shows, many breeds of them did perish. They were driven to expand their brain power beyond its natural limits. They organised it collectively. This gave them a new weapon. Instead of merely changing themselves so as to conform to their environment, they began to change their environment consciously according to their needs by *producing* their means of subsistence. Thus, the three characteristics we have distinguished—tools,

speech, co-operation—are parts of a single process—the labour of production. This process is distinctively human, and its organising unit is society.

4. *Speech and Thought among the Apes*

Speech and thought are so closely interwoven that one might suppose them to have been inseparable from the beginning; but this is not the case.

Though incapable of articulate speech, the apes have a wide phonetic range, which they use to the full. They chatter volubly, and their utterances are undoubtedly expressive, but only of passive, affective states, such as anger, fear, desire, satisfaction. By such means they are able to maintain lively and continuous conversations. This is a rudimentary form of speech, but purely affective, unconnected with thought.

Again, although incapable of forming even the simplest concepts, they possess the ability to solve simple practical problems encountered in their handling of natural objects, such as manipulating a stick to get hold of a banana which is out of reach. This is a rudimentary form of thought, unconnected with speech.

A similar distinction may be observed among children. In them, too, speech and thought, in their initial phase, are independent of one another. It is only at a later stage that speech is rationalised and thought is vocalised.

Let us now turn to gesticulation. Two types of gesture may be observed among children. One is the mimetic gesture, in which the child simulates the desired action. For example, desiring to be lifted up, it raises its arms and legs as if in the act of being lifted. Gestures of this type are developed at a very early age. The second type, which does not appear until much later and marks a decisive stage in the development of speech, is the pointing gesture. The child draws attention to an object by pointing to it. Later still, matching the deed with a word, it will *name* the object. The gesture is

vocalised. In the next stage the child proceeds to vocalise its mimetic gestures in the same way. The combined action of voice and hand leads to the formation of concepts.

The mimetic gesture is common among the apes. For example, one chimpanzee induces another to give it a banana by raising its arm and closing its fist in the air. Such gestures are affective, but at the same time they have an objective value. They are unspoken commands. The pointing gesture, on the other hand, is not found among the apes.

From this evidence it may be inferred that the decisive factor in the transition from ape to man was the development of co-operation in the use of tools. The cries and gestures of the pre-human stage were combined and co-ordinated in collective labour so as to form a new mode of communication, in which the basic unit was the spoken word, embodying a generalised reflection of the external world as perceived by the senses.

This may be called the labour theory of the origin of speech :

First, labour; after it, and then with it, speech—these were the most essential stimuli under the influence of which the brain of the ape changed gradually into that of man, which for all its similarity is far larger and more perfect. (ME 3.69.)

Speech and Song

1. *Sentence Structure*

In this chapter it will be argued that the structural principles of speech and music have a common origin in the labour-process.

In articulate speech words are constructed in sentences so as to transmit messages between individual members of the community. The community consists of all those individuals who are able to communicate in this way, thanks to the possession of a common form of speech. In primitive conditions, every community, however small, possesses its own language or dialect, which has evolved gradually along with the evolution of the community itself.

The sentence is the organic unit of articulate speech. The rules for constructing sentences constitute the science of grammar. They are acquired by the child empirically in the course of learning to speak. A child learns to talk without knowing anything about the rules of grammar, just as he learns to walk without understanding the laws of equilibrium.

Every language has its own grammatical system, but there are certain structural principles which are common to all languages (CPE 190). These principles are related to the principles of logic. The grammatical sentence corresponds to the logical proposition. This does not mean, of course, that the child who has learnt to speak correctly has thereby mastered the rules of logic, but he has acquired a mental skill without which logical thinking would be impossible.

In analysing the structure of the sentence, it will be helpful to keep in mind the Chinese terms for 'noun' and 'verb', which are more expressive than ours: the noun is a 'name-word' and the verb is a 'move-word'. It should also be noted that the term 'noun' is used here to cover both substantive and adjective.

The simple sentence resolves itself into three basic types—the sentence of two terms, which exists in two forms, and the sentence of three terms: (1) 'Grass is green', (2) 'Sheep eat', (3) 'Sheep eat grass'. In Type 1 two nouns are combined as a unity of opposites. The relationship between them may be expressed in logical terms by saying that the concept 'grass' is included in the category 'green' and the concept 'green' is identified as a property of 'grass'. (The copula *is* may be disregarded, because, though it is necessary in English, many languages do without it, and it is not primitive. So too may the order of the words, which varies in different languages.) In Type 2 a noun and verb are combined in the relation of agent and action; in Type 3 the same combination is extended so as to include the goal or object of the action. Both noun and verb denote concepts, the one static and the other dynamic, corresponding to the distinction between the pointing and the mimetic gesture discussed in the last chapter.

In these examples the agent coincides with the grammatical subject, and the object of the action with the grammatical object. In the sentence as we know it, of course, this is not necessarily the case. The relation may equally well be reversed: 'Grass is eaten by sheep'. (Here the object of the action is the grammatical subject.) Similarly, we habitually use verbal sentences from which all idea of action is excluded: 'He rests in peace'. Grammatical categories are by their very nature formal. It is only because they are devoid of concrete meaning that they can convey abstract thought. It is, however, beyond doubt that they go back to a concrete origin. All the evidence from psychology and linguistics points

to this conclusion. The essence of the process involved in the mental development of the child consists precisely in the advance from concrete to abstract forms of thinking. Even in languages so highly developed as our own, such abstract ideas as rest, dependence, expectation, obedience, virtue, wicked, heavy, round reveal on inspection the marks of their concrete origin. To rest is to resist motion, to depend is to hang on, to expect is to look out for, to obey is to listen to, virtue is manliness, wicked is bewitched, heavy is hard to lift, round is wheel-like. And when we turn to primitive languages we find that it is precisely in the capacity to express abstract ideas that they are most defective. In some Australian languages there were no words at all for 'round' or 'hard'. These ideas were expressed by reference to material objects—'like the moon', 'like a stone'—accompanied by gestures.

It may, therefore, be regarded as certain that, since speech is the medium through which man has advanced from concrete to abstract thinking, the categories of speech, which as we know them are purely formal and abstract, must in the initial stage have been functional and concrete; and, that being so, their origin must be sought in the labour of production.

2. *The Structure of the Labour-process*

At this point we must pause to clarify an ambiguity in the English word 'subject'. In the preceding analysis of the simple sentence, we used the words 'subject' and 'object' to mark the distinction between the agent—that is, the subject of the action of the verb—and the object—that is, the goal towards which the action is directed. It is in the same sense that Marx speaks of 'the subject, man, and the object, nature' (CPE 190). Elsewhere, however, as in the passages about to be quoted, he describes the object of the labourer's activity—that is the material on which he works—as the 'subject' of his

activity, meaning that which is *subjected* to his labour. This confusion does not occur in the German original. In what follows, therefore, it must be understood that the 'subject of labour' is the object of the labourer's activity.

In his analysis of the labour-process Marx distinguishes three factors :

The elementary factors of the labour-process are (1) the personal activity of man, that is, work itself, (2) the subject of that work, and (3) its instruments. (C 1.178.)

The second factor is described as follows :

The soil (and this, economically speaking, includes water), in the virgin state in which it supplies him with necessaries or means of subsistence ready to hand, exists independently of man and is the universal subject of human labour. (C 1.178.)

And the third factor :

An instrument of labour is a thing, or a complex of things, which the labourer interposes between himself and the subject of his labour, and which serves as the conductor of his activity. He makes use of the mechanical, physical and chemical properties of some substances in order to make other substances subservient to his aims. (C 1.179.)

Thus, the tool is an instrument which serves to transmit the labourer's activity to the material on which he works, thereby re-shaping it in accordance with a preconceived design :

In the labour-process, man's activity, with the help of the instruments of production, effects an alteration, designed from the commencement, in the material worked upon. The process disappears in the product. The latter is a use-value, nature's material adapted by

a change of form to the wants of man. Labour has incorporated itself with its subject; the former is materialised, the latter is transformed. That which in the labourer appeared as movement now appears in the product as a fixed quality without motion. The blacksmith forges and the product is a forging. (C 1.180.)

Accordingly, the function of speech in the labour-process may be defined as follows. Just as the instruments of production are interposed between the labourers and their material, serving as conductors of their activity, so speech is interposed between the labourers themselves as the medium through which they co-ordinate their actions.

It may therefore be concluded that, as the organic unit of articulate speech, evolved in the process of social production, the grammatical sentence, in its elementary forms of three terms, the third mediating the action of the first upon the second, or of two terms, the one acting through the other or being incorporated in the other, embodies the three component factors of the labour-process—the activity of the subject (man), the object of his action (nature), and its instrument.

3. *Song Structure*

The principles of grammar and of musical form rest on a common foundation.

In all languages we find a class of words which for the sake of a name may be called 'mimetic doublets': ding-dong, bow-wow, see-saw, tick-tock, zig-zag, pitter-patter. Ignored by most grammarians, these words do not fit readily into any of the conventional parts of speech; yet they have several well-defined characteristics. First, they are onomatopoeic, that is, imitated from natural sounds. This marks them as human; for apes do not imitate natural sounds. It is recognised that onomatopoeia was one of the main sources of language

material. Secondly, they are reduplicated : that is, they consist of a single element, usually a monosyllable, repeated with a phonetic variation. This is a rudimentary form of inflection. Mimetic doublets are especially common in baby talk and in primitive languages, and they have left many traces in the grammatical structure of our own languages.

Turning to music, we find that the mimetic doublet is an integral feature of the labour-song, which we shall now examine.

A labour-song, or work-song, is a directive accompaniment to some form of manual labour, collective or individual, such as rowing, heaving, hauling, reaping, spinning, etc. It falls into two parts—refrain and improvisation.

The refrain, or labour-cry, is an inarticulate cry uttered at the actual moments of exertion and repeated without variation. It is essentially nothing more than a reflex action of the vocal organs accompanying the other bodily movements, but charged with the conscious purpose of synchronising the action. It consists in its simplest forms of two or three syllables. The disyllabic type is exemplified in the rowing-cry which the cox shouts to his crew: 'o—up!' The first syllable is a preparatory signal, the second marks the moment of exertion. In the trisyllabic type the third syllable marks the pause for relaxation after the effort, as in the Volga Boat Song: 'e—úch—nyem!'

The improvisation, sung during the intervals between the labour-cries, is fully articulate and variable, expressing the workers' subjective attitude to their task, as in this stone-breakers' song from South Africa :

They treat us badly, e-hé!
They are hard on us, e-hé!
They drink their coffee, e-hé!
And give us none, e-hé!

Thus, the improvisation stands to the labour-cry as a whole in the same relation as the first syllable of the

labour-cry to the second. The song has grown out of the cry, just as the cry has grown out of the work itself.

The fully-developed song differs from the labour-song in being detached from the labour-process. There are still two components, vocal and manual, the tool being replaced by a musical instrument; but the voice is now dominant and may be used alone. That the song proper has developed out of the labour-song is proved by its structure. There are two main lines of development.

In the first, the improvisations are grouped in rhyming pairs, and the refrains, still tied to the labour-process, are expanded and become articulate, as in this sea-shanty :

*Louis was the king of France afore the Revolution,
Away, haul away, boys, haul away together!
Louis had his head cut off, which spoilt his constitution,
Away, haul away, boys, haul away together!*

Freed from the labour-process, the refrain becomes purely formal and acquires the value of a cadence :

*Why does your brand sae drop wi' blude,
Edward, Edward?
Why does your brand sae drop wi' blude,
And why sae sad gang ye, O?
O, I hae kill'd my hawk sae gude,
Mither, mither,
O, I hae kill'd my hawk sae gude,
And I had nae mair but he, O.*

This brings us to the most familiar of all verse forms, the quatrain, composed of two rhymed couplets, the rhymes being a vestige of the lost refrains :

*There liv'd a lass in yonder dale,
And down in yonder glen O,
And Kathrine Jaffray was her name,
Well known by many men O.*

Here is an example from China (ninth century A.D.):

*A thousand miles from home,
At court these twenty years,
One phrase from that old tune
Draws forth your tears.*

Verse forms of this type are found all over the world.

Analysed as music, the quatrain is a musical *sentence* divided into two *phrases*, each of which contains two *figures*. The two phrases stand to one another as *announcement* and *responsion*, the first leading to the second, the second following from the first. Together they constitute a formal unity, which is derived from the functional unity of the two parts of the labour-song. This is what musicologists call *binary* form: A-B.

In the second line of development, the refrains are arranged in groups of three, with improvisations following the first and second:

A *Lowlands, lowlands, lowlands, lowlands low,*
B *Our captain was a bully man.*
A *Lowlands, lowlands, lowlands, lowlands low,*
B *He gave us bread as hard as brass*
A *Lowlands, lowlands, lowlands, lowlands low.*

In this sea-shanty we see ternary form emerging out of binary form. And finally, detached from labour, the distinction between improvisation and refrain loses its functional value and becomes purely formal. This gives us fully-developed ternary form (A-B-A):

A *O Charlie is my darling, my darling, my darling,
Charlie is my darling, the young Chevalier.*
B *'Twas on a Sunday morning right early in the year
That Charlie came to our town, the young
Chevalier.*
A *O Charlie is my darling, my darling, my darling,
Charlie is my darling, the young Chevalier.*

Thus, the two types of grammatical sentence, two-

term and three-term, correspond to the two types of musical sentence, binary and ternary; and the two types of sentence, grammatical and musical, correspond to the two aspects of the labour-process—the objective or cognitive aspect and the subjective or affective aspect, the one organised in logical form and the other in rhythmic form.

Primitive Knowledge

1. *Perceptual and Rational Knowledge*

According to dialectical materialism, the basis of knowledge is social practice :

Marxists hold that man's social practice alone is the criterion of the truth of his knowledge of the external world. What actually happens is that man's knowledge is verified only when he achieves the anticipated results in the process of social practice (material production, class struggle, or scientific experiment). If a man wants to succeed in his work, that is, to achieve the anticipated results, he must bring his ideas into correspondence with the laws of the objective external world; if they do not correspond, he will fail in his practice. (MSW 1.296, cf. LCW 14.109.)

In the course of his social practice, which he pursues with the conscious aim of changing the external world, man acquires gradually, through trial and error, an understanding of its laws. At first, his knowledge is confined to the external appearances of things. This is the stage of perceptual knowledge. Through further practice, however, he penetrates into their essential nature. This is the stage of rational, or logical, knowledge. The advance from perceptual knowledge, based on sense impressions, to rational knowledge, based on fully-developed concepts, is the decisive step in the development of cognition :

As social practice continues, things that give rise to man's sense perceptions and impressions in the course

of his practice are repeated many times; then a sudden change (leap) takes place in the brain in the process of cognition, and concepts are formed. Concepts are no longer the phenomena, the separate aspects and external relations of things; they grasp the essence, the totality and the internal relations of things. Between concepts and sense perceptions there is not only a quantitative but also a qualitative difference. (MSW 1.298.)

The advance from perceptual to rational knowledge is effected by a process of analysis and synthesis, in which we conceptualise our sense impressions by abstracting the essential from the phenomenal, the general from the particular, and by arranging them in a theoretical system based on logical categories :

Fully to reflect a thing in its totality, to reflect its essence, to reflect its inherent laws, it is necessary through the exercise of thought to reconstruct the rich data of sense perception, discarding the dross and selecting the essential, eliminating the false and retaining the true, proceeding from the one to the other and from the outside to the inside, in order to form a system of concepts and theories—it is necessary to make a leap from perceptual to rational knowledge. (MSW 1.303.)

The advance from perceptual to rational knowledge may be observed in ourselves, whenever we extend our knowledge into some sphere of activity previously unknown to us or known only superficially. It may also be observed in children. The process of forming simple concepts begins in children as soon as they begin to speak, but the stage of fully-developed conceptual thinking, including the comprehension of logical relationships, is attained only at puberty. This process of learning to speak and think is the vehicle through which the child assimilates the knowledge accumulated by its elders, and therefore the level which it eventually attains depends

on the cultural level of the community. Primitive thought is rightly described as childlike, because it operates entirely at the level of perceptual knowledge. In contrast to civilised thought, it is concrete, subjective, deficient in the power of abstraction. It reflects an affective rather than a cognitive attitude to reality, corresponding to a lower level of social practice.

In this chapter we shall examine these features of primitive thought to see what light they throw on the nature of civilisation.

2. *The Associative Complex*

It is generally acknowledged that there are some significant parallels between child psychology and primitive psychology. As the civilised child learns to speak and think, he passes through a process of intellectual development which resembles in many of its characteristic features the mentality of primitive peoples as revealed by social anthropology. Further evidence of the same kind is provided by historical linguistics. A language changes very slowly—much more slowly than the social relations of the people that speaks it; and consequently it tends to preserve, imbedded like fossils in its structure, obsolete forms pointing back to primitive modes of thought.

We shall now examine the 'associative complex'. This phenomenon, first identified by Vygotsky, a follower of Pavlov, marks an important stage in the mental development of children. Our aim will be to show, first, that this mode of thinking underlies the grammatical category of gender and other similar categories in our own and other languages, and, secondly, that it still survives among primitive peoples in conditions which enable us to identify its origin.

In the earlier stages of mental development the child 'thinks in complexes'. A complex is a group of objects which have become loosely associated in the child's mind in the course of social practice. At first the group-

ing is wholly subjective, being based on superficial sense impressions, and therefore inherently unstable. With further practice, however, the child begins to recognise certain objective relationships, perceptual and functional rather than rational or formal—as, for example, when he arranges the knives, forks and spoons in groups on the dinner-table. Such a complex may be regarded as a 'family' of related objects :

Any family name—Petrov, for example—subsumes individuals in a manner closely resembling that of the child's complexes. At that stage of development the child thinks in family names, as it were. The universe of individual objects becomes organised for him by being grouped into separate, mutually related 'families'.

In a complex, the bonds between its components are concrete and factual rather than abstract and logical, just as we do not classify a person as belonging to the Petrov family because of any logical relationship between him and other bearers of the name. The question is settled for us by facts. (L. Vygotsky, *Thought and Language*, 1962, p. 61.)

The family is cited here simply to illustrate what an associative complex is. It can, however, be shown that in its original form—the totemic clan—the family group was actually the prototype of all such complexes.

3. *Grammatical Classes*

First of all, turning from psychology to linguistics, the process of 'thinking in complexes' can be shown to underly certain grammatical categories.

A feature common to many languages in all parts of the world is the existence of grammatical 'classes'. Every substantive is assigned to one or another of two or more classes, which are morphologically distinct. The basis of classification varies. In some African languages the substantives are classified as animate and inanimate, in

others as big and little. In Chinese there is a different system, to be described presently. In our own family of languages we find three classes, which are called 'genders'—masculine, feminine and neuter.

The problem presented by these systems is that, unlike other grammatical categories, such as number and tense, they do not correspond to any recognisable logical necessity. The category of gender, for example, is clearly related in some way to distinctions of sex; but why should the idea of sex enter into the classification of inanimate objects? Why should we say in French, for example, *le crayon* 'pencil' and *la plume* 'pen'? The distinction has no logical or objective basis. It is purely formal.

Turning to the history of these languages, we find that at an earlier stage the category of gender was a faithful reflection of the real world as conceived in primitive thought. The masculine was reserved for male beings or things regarded as having male functions, such as the sky as the source of rain and rivers as fertilising agents. The feminine was reserved in the same way for female beings and things, such as the earth and trees, which bear fruit. The neuter was associated with offspring and children, which being immature were regarded as sexless. This explains why the neuter was regularly used in the formation of diminutives, and similarly the neuter alternates with the feminine in distinguishing the fruit from the tree: Greek *mêlon* (neuter) 'apple', *meléa* (feminine) 'apple-tree'.

It may, therefore, be concluded that the category of gender was in origin an associative complex, in which natural phenomena were reduced to order in the primitive consciousness by arranging them in groups based on distinctions of sex.

Let us now turn to the Chinese system of classification, which, at least in appearance, is totally different.

In English we speak of 'a head of cattle', 'a length of cloth', 'a piece of chalk'. Similarly, in Chinese one speaks of 'one branch street', 'one mouth man'. The words for 'branch' and 'mouth' are used here as 'classifiers'.

There are more than fifty of these classifiers, which are used to group the substantives in classes on the basis of some superficial similarity between the objects which they denote. Thus, the word 'branch' is used as a classifier with substantives denoting objects conspicuous for their length, such as street, rope, bench, snake etc. The word 'mouth' is used with substantives denoting objects which have a mouth or mouth-like opening: man, pig, well, pot, etc. Notwithstanding its arbitrary basis, the system serves a real purpose. The Chinese language abounds in homophones—that is, different words with the same sound, like our 'rain', 'rein', 'reign'—, and the classifiers are used to distinguish them: *i zo shan* 'one (site) mountain', *i jian shan* 'one (article) shirt'. This circumstance explains the preservation and elaboration of the system, but not of course its origin. That becomes clear when we consider the mode of thinking on which the classification rests. Objects are grouped together by reference to external and subjective relationships based on sense impressions and devoid of internal coherence. This is thinking in complexes of the most rudimentary type. (That does not mean, of course, that the Chinese language is primitive, as we know it, but rather that, starting from very primitive beginnings, its development as a civilised medium was exceptionally rapid.)

Having identified the psychological origin of these grammatical class systems, we see why it is that they display so much diversity in regard to the basis of classification—sex, size, shape, etc. Just because they are lacking in depth, the complexes of primitive thought, like those of child thought, are inherently unstable. The feature common to them all is the need to classify:

Man is confronted by a *web* of natural phenomena. Instinctive man, the savage, does not distinguish himself from nature. Conscious man does distinguish. Categories are stages of distinguishing, that is, of cognising the world, focal points in the web, which assist in cognising and mastering it. (LCW 38.93.)

4. *Totemism*

The evidence reviewed so far, psychological and linguistic, indicates that the associative complex belongs to a very early stage in the development of thought. This conclusion is confirmed by the evidence of totemism, which is the ideology characteristic of the primitive tribe, going back to the beginnings of human society.

The nucleus of human society was a small nomadic band distinguished from the anthropoids only by a few simple artefacts and the use of fire. This nucleus evolved by fission. First, it divided into two exogamous and intermarrying groups, called moieties. The men of the one moiety mated with the women of the other. The children belonged to their mother's moiety. Then the moieties divided. This gives us the simple tribal structure of two moieties and four clans.

The initial fission was probably connected with the development of organised hunting, following the invention of the spear. This was the first division of labour, based on sex: the men hunted, while the women, being less mobile than the men, continued the work of food-gathering, which had previously been the task of all. The hunting of different animals was organised on a co-operative basis. Each clan was associated with a particular species, or group of species, of animal or plant, which became its totem. These totemic associations persisted in various forms long after they had lost their original function in the quest for food. Just as the tribe was divided into so many clans, each with its own totem, so each tribesman defined his relationship to the others by identifying himself and them with the appropriate species of animal or plant. (An Australian tribesman, whose totem was the kangaroo, was shown a photograph of himself, and exclaimed, "That one is the same as me—so is a kangaroo!") In this way the totemic groupings provided the framework for the formation of associative complexes. The social category became a mental category.

Thus, totemism goes back to the initial stage in the emergence of human society out of the animal world. In that stage man had not yet separated himself from nature, objectively or subjectively. Objectively, his relations with his fellow-men were natural rather than social; subjectively, those relations were expressed in terms of his relations with nature :

The identity of nature and man appears in such a way that the restricted relation of men to nature determined their restricted relation to one another, and their restricted relation to one another determined their restricted relation to nature, just because nature is as yet hardly modified historically. On the other hand, man's consciousness of the necessity of associating with the individuals around him is the beginning of the consciousness that he is living in society at all. This beginning is as animal as social life itself at this stage. (GI 42.)

Thus, the associative complex, which manifests itself both in the mental development of the child and in the early history of language, was in origin the conscious reflection of the first specifically human relations to be formed through the development of production in the transition from ape to man.

5. *Ritual and Myth*

Man differs from the animals in being conscious of his life activity. He can disengage himself mentally from his activity in such a way as to form an idea of it as distinct from the reality. This is the key to the understanding of primitive ritual. Ritual is still practice, but practice separated from the labour-process.

The nature of primitive ritual may be illustrated by examining one of its most widespread manifestations—the mimetic dance.

Mimesis, or conscious imitation, is a characteristic

which man has inherited from his simian ancestors. In him it has been cultivated as a pre-enactment or re-enactment of the labour-process with the objective function of improving his performance. Separated from the actual process, the vocal and bodily movements of collective labour are organised as an independent activity combining song and dance. Such activities are a universal feature of tribal life. They are designed to represent dramatically the growth and gathering of the totem species, if it is a plant, or, if an animal, its distinctive habits and in some cases the act of catching it and killing it. Later, they assume the character of an appeal to the clan ancestors, who are impersonated in their totemic form and called upon to give their help to the living members of the clan. At puberty the children are initiated into adult status by a mimetic rite in which it is pretended that they die and are born again. The rite takes place at a distance from the settlement, preceded by a tearful departure and followed by a joyful return. In the higher stages of tribalism we find mimetic dances associated with the whole range of natural phenomena—dances to make the crops grow, dances to bring in the summer, dances to avert natural disasters, dances to revive the waning moon.

A single example will serve to show the psychological principle on which mimetic ritual rests.

The Maoris of New Zealand had a potato dance. The young shoots were liable to be blasted by east winds. Accordingly, the women who cultivated the gardens performed a dance, in which they simulated the rush of the wind and rain and the sprouting and blossoming of the crop; and, as they danced, they sang, calling on the crop to follow their example.

These dancers believed that by dramatising the growth of the crop, they could compel it to grow. This is the basis of primitive magic, which is in origin nothing more than a simple act of mimesis. Being still at the stage of perceptual knowledge, the dancers were unaware that the external world was governed by objective laws, in-

dependent of their will. Yet the performance was not wasted. Just as in the labour-process man forms a pre-conceived image of the desired result, so in the mimetic dance he pre-enacts in fantasy the fulfilment of the desired reality. Regarded from this point of view, the dance has a positive value, both subjective and objective.

Subjectively, it affects the dancers' attitude to the real task. Inspired by the dance in the belief that it will save the crop, they proceed to the task of tending it with greater confidence, and so with greater energy, than before. It changes their subjective attitude to reality, and so indirectly it changes reality. Objectively, being connected with the labour-process and yet separate from it, it enables the labourers to withdraw from the immediate experience of that process and so to objectify it. In this act of mental withdrawal we may recognise the starting-point of the process which leads eventually to the transition from perceptual to rational knowledge.

Detached from the labour-process, the ritual act is still regarded as necessary for success in the real task, but is no longer identified with it. It is directed by a chief or priest, who in return for his services is exempted from manual labour. This is the beginning of religion.

At this point there emerge two new distinctions—the conscious differentiation between theory and practice, which is a prerequisite for scientific thinking, and the conscious differentiation between fantasy and reality, which is a prerequisite for artistic thinking. The further development of these two processes belongs to the stage of civilisation, based on the division between mental and manual labour.

Meanwhile, detached from labour, the mimetic dance becomes a recreative activity which serves as a vehicle for rehearsing the tribal traditions. This gives us the choral ode, a combination of song and dance, which marks the initial stage in the evolution of epic and ballad poetry.

Other offshoots of mimetic magic, besides music and poetry, are painting and sculpture. The earliest speci-

mens known to us—the paleolithic cave-paintings and figurines—were used in magical performances to promote fertility in man and nature. In the primitive consciousness, as in the child's, the image of a thing is inseparable from the thing itself; and hence, if I fashion an effigy of a living creature, man or beast, I hold that creature in my power. Even in ancient Greece, where these arts first emerged from ritual, there still clung to them traces of their magical associations.

6. *Cosmological Myths*

The tribal traditions were transmitted in the form of myths. These were, in origin, nothing more than the oral accompaniment to the ritual act. Detached from ritual, they became more coherent and objective, leading to the formation of abstract notions of space and time.

In primitive thought the world of nature is a projection of the social world. Just as the tribe had evolved by fission from the original nucleus, with the exogamous moieties ranged in opposition to one another, so the universe was formed by the separation and subsequent reunion of heaven (male) and earth (female), and it was maintained in being by a perpetual conflict of opposites—day and night, summer and winter, life and death. In keeping with the totemic character of primitive thought, this rudimentary world picture was conceived in animal form.

According to the natives of southern Victoria, the world was created by the eagle and the crow, who after waging a long war against each other made peace, and the people were divided into the moieties that bore their names. The tribesmen of the Lower Darling River had another version. Their first ancestors arrived at the river with two wives, named Eagle and Crow. The eagle's sons married the crow's daughters and their children

were crows; the eagle's daughters married the crow's sons, and their children were eagles. Later the eagles divided into kangaroos and opossums, the crows into emus and ducks. In these examples the creation of the world is identified with the formation of the tribe. Nature and society are one.

Everywhere among nomadic peoples the tribal camp is arranged on the pattern of the tribal structure. It consists, in its typical form, of a circle divided by the line of march into two semicircles, corresponding to the two moieties, and each semicircle is divided into two quarters, corresponding to the clans of which the moieties are composed. One way of expressing the rule of exogamy is to say that a man must take a wife from the far side of the circle. Since the totemic species are assigned to the same segments as the clans to which they belong, the lay-out of the camp is, in effect, a diagram displaying the organisation of the natural world.

Among the Australian tribes the totemic species are grouped together subjectively with reference to the concrete conditions in which they are found by man. Trees are associated with the birds that nest in them, aquatic plants with water-fowl and fish. Among the American Indian tribes, which were far more advanced than the Australian, we find two significant developments.

In the first place, the totemic species are now usually classified with some recognition of their objective natural affinities. Among the Mohegans, for instance, there were three phratries—Wolf, Turtle and Turkey. (The phratry is a group of clans formed by division from a single clan.) These phratries were divided into eleven clans, as follows: (1) wolf, bear, dog, opossum; (2) little turtle, mud turtle, great turtle, yellow eel; (3) turkey, crane, chicken.

In the second place, the totemic system of classification begins to disintegrate. The Ponkas of Missouri were a tribe of two moieties, four phratries and eight clans. The camp took the form of a circle, with the entrance usually on the west side. In the first quarter, to the left

of the entrance, was the phratry of fire, and behind it, in the second quarter, the phratry of wind. In the third quarter, to the right of the entrance, was the phratry of water, and behind it, in the fourth quarter, the phratry of earth. Each clan was associated with various animals, but these were not grouped on any recognisable principle. In this example the totemic identifications survive only at clan level. At the higher levels they have been replaced by the abstract concept of four elements.

The Zuñis of New Mexico were organised in seven village wards or phratries, each containing three clans, except the seventh, which had only one clan, thus: (1) to the north, Crane, Grouse, Yellow-wood; (2) to the south, Tobacco, Maize, Badger; (3) to the east, Antelope, Deer, Turkey; (4) to the west, Bear, Coyote, Spring-herb; (5) above, Sun, Sky, Eagle; (6) below, Water, Rattlesnake, Frog; (7) in the centre, Macaw. The north was associated with wind, winter and war; the south with fire, summer and tillage; the east with frost, autumn and magic; the west with water, spring and peace. The north was yellow, the south red, the east white, the west blue. In earlier times there had been only six phratries, and still earlier only four. At the creation of the world the race of men was presented by a magician with two pairs of eggs. One pair was blue, like the sky; the other was red, like the earth. Some men chose the blue eggs, others the red. From the blue eggs was hatched the crow, which flew away to the cold north; from the red eggs was hatched the macaw, which went to the warm south. The tribe was divided accordingly into two moieties, one of which comprised the north and winter, the other the south and summer; and so between them they covered the whole of space and time.

Here again the clans retain their totemic associations, but the higher units are arranged systematically as pairs of opposites representing logical categories of substance, quality, space and time.

These ideas were carried still further by the Mayas and Aztecs of Mexico, from whom indeed the Zuñis

probably borrowed some features of their system through cultural contact. The Mexicans had a solar calendar, constructed by their chiefs within a framework of tribal ideas. The year was divided into eighteen months of twenty days each, with five additional days. The month was divided into four five-day weeks, and the first day of each week was named after one of four signs—rabbit, flint, house, cane. These signs were used to regulate the calendar, and had other applications. The rabbit was associated with the north, black, winter, air; the flint with the south, blue, summer, fire; the house with the east, white, autumn, earth; the cane with the west, red, spring, water. In addition to the four cardinal points, there were three others—the centre, zenith and nadir. Just as the calendar cycle was regulated by the four signs, so there was a cosmic cycle of four epochs, at the end of which the world was destroyed and re-created. Both cycles were maintained by a perpetual war between north and south, east and west, heat and cold, day and night—a war enacted year by year in ritual combats by rival groups of warriors.

We are now at the threshold of civilisation. If the four horizontal points are tribal, it is equally clear that the vertical extension, represented by the three additional points, is hierarchical. The Mexican world was divided into three levels—the upper world of the gods, the middle world of the living, and the lower world of the dead. The fifth point, or centre, at which the lateral and vertical lines intersect, represented the chieftaincy or kingship, whose function was to mediate the relations between gods and men.

This interpretation is abundantly confirmed when we compare the Mexican system with the cosmological theories of ancient society. In Egypt we find a four-point system, regulated by the king. In Greece, too, a four-point system underlies such concepts as the four elements, the four seasons, the four humours, etc. In China and India there was a five-point system, also regulated by the king, who resided at the centre. In

Babylonia there was originally a four-point system, but later the points were increased to seven, with the centre again assigned to the king, who mediated the relations between earth and heaven. One more example, nearer home, may be quoted. In ancient Ireland, besides the four modern provinces situated to the north, south, east and west, there was a fifth, the province of Meath (Irish *midhe* 'middle'), which contained the royal capital, Tara, the seat of the High King.

This survey has shown that primitive man's conceptions of the universe were formed within the framework of his social relations. Throughout the prehistoric period their development had been as gradual and continuous as the development of society itself; but then, with the dissolution of tribal society, they entered on a period of qualitative change, marking the advance from perceptual to rational knowledge and laying the foundations of modern science. This profound intellectual change is the expression of changes equally profound in the structure of society—the separation of mental from manual labour, the division of the community into classes, and the formation of the state.

Natural Philosophy

1. *Theory and Practice*

According to Marxism-Leninism, the development of knowledge is a dialectical process, which proceeds in a cyclical movement through three successive stages.

The first stage is the stage of perceptual knowledge :

The first step in the process of cognition is contact with the objects of the external world. This belongs to the stage of perception . . . Knowledge begins with experience—this is the materialism of the theory of knowledge. (MSW 1.302.)

The second is the stage of rational knowledge :

The second step is to synthesise the data of perception by arranging them and reconstructing them. This belongs to the stage of conception, judgment and inference. . . . Rational knowledge depends on perceptual knowledge, and perceptual knowledge remains to be developed into rational knowledge—this is the dialectical-materialist theory of knowledge. (MSW 1.302.)

The third is the return from theory to practice :

Knowledge begins with practice, and theoretical knowledge is acquired through practice and must then return to practice. . . . This is the process of testing and developing theory, the continuation of the whole process of cognition. (MSW 1.304, cf. LCW 38.171.)

It is through this dialectical movement, constantly

renewing itself on an ascending scale, that man is able to comprehend and control the ever-changing phenomena of the external world, which are reflected in his consciousness :

All the dialectical movements of the objective world can sooner or later be reflected in human knowledge. In social practice, the process of coming into being, developing and passing away is infinite, and so too is the process of coming into being, developing and passing away in human knowledge. As man's practice, which changes objective reality in accordance with given ideas, theories, plans or programmes, advances further and further, his knowledge of objective reality likewise becomes deeper and deeper. The movement of change in the world of objective reality is never-ending, and so is man's cognition of truth through practice. (MSW 1.306-7, cf. LCW 38.195.)

Historically speaking, as we saw in the last chapter, the transition from perceptual to rational knowledge coincides with the division of society into classes. It was only through the emergence of a ruling class, free from manual labour, that the development of theoretical knowledge became possible; yet that same class, once established, becomes isolated from practice and so tends to obstruct the further development of knowledge. The dialectics of human thought reflect the dialectics of the class struggle.

2. *Mental and Manual Labour*

The history of ancient society in the Near East falls into two main epochs, divided by the transition from bronze to iron, from debt slavery to chattel slavery, and from the hieratic monarchies of Egypt and Mesopotamia to the Graeco-Roman city-states. The principal contradiction of the first epoch lay between the land-owners and the cultivators; of the second, between the slave-owners and the slaves.

The beginning of the first epoch, marked by the development of large-scale irrigation, was more prolific in technical inventions than any other period in history prior to the seventeenth century A.D. These inventions were rendered possible by the new division between mental and manual labour. The mental labourers were the chiefs and priests, who planned and organised production; the manual labourers were the artisans and the cultivators. In time this division of labour hardened into a division of classes—the ruling class of landowners, headed by the king, and the masses of peasants and artisans. In addition, there was a substantial slave population, composed of captives taken in war and persons enslaved for debt; and, with the expansion of trade, there arose a new class of merchants. Their interests lay in the further development of commodity production; but this was resisted by the ruling class, which, thanks to its control of irrigation, was too powerful to be overthrown. The relations of production had become an obstacle to the further development of the productive forces. The result was a marked decline in the rate of technical progress, a deepening cleavage between theory and practice, and the elaboration of the idea of god and of religious worship as a moral sanction for the established order.

It is in this light that we must assess the cultural achievements of Egyptian and Mesopotamian society.

Among the technical inventions dating from the beginning of this epoch may be mentioned the wheel, the sail, writing and mathematics. The wheel and the sail revolutionised transport, thereby promoting commodity production; writing and mathematics were indispensable, not only for large-scale commodity exchange, but for engineering, architecture and astronomy.

The inventors of the wheel and the sail were pioneers in the history of industry and science. Their knowledge was true knowledge, based on the unity of theory and practice; but it was confined to a particular kind of labour or craft, and therefore it did not involve a general

advance in the level of abstract thinking. This limitation did not apply, however, to writing and mathematics.

The invention of writing opened a new stage in the evolution of speech. Written speech is by its nature less spontaneous, more deliberate and detached, than oral speech. It is oral speech divested of its sensory aspect and so raised to a higher level of abstraction. It was only after the invention of writing that man became conscious of speech as an objective reality governed by its own laws, which he then proceeded to formulate as rules of grammar. Literacy introduced a new quality into the spoken arts and provided an indispensable instrument of scientific analysis.

Mathematics marks a still further advance. It is an instrument of thought which has divested itself of speech altogether. Just as speech enables man to generalise the data of sense perception by forming concepts, so the mathematician generalises the generalisations formed on the basis of speech by raising them to a still higher level of abstraction. In mathematical thinking the qualitative aspects of phenomena are expressed entirely in quantitative terms.

So much for the positive side of these achievements. On the negative side, we find that, after the initial impetus had been exhausted, there was not only a diminution in the number of new inventions, but some of those already made fell short of obvious extensions or were diverted to unproductive ends.

The craftsmen of this period invented the cart-wheel, the potter's wheel and the water-wheel, but there were no wheeled ploughs. The sailing-boat was restricted in size and speed by its dependence on the steering-oar. The wheeled plough and the stern-post rudder were not invented till the middle ages.

The art of writing became a closed craft, with the result that the scripts remained needlessly complicated. It was left to the Phoenicians and Greeks to invent the alphabet.

Thanks to systematic observations recorded over long

periods, the Babylonian priests were able to predict solar eclipses, but they used their knowledge to propagate the pseudo-science of astrology. It was left to the Greek philosophers to free astronomy from astrology.

The extent to which the priests of this epoch cultivated primitive modes of behaviour, and their motive in doing so, may be illustrated from the ritual of the Egyptian kingship.

Having inherited the prestige formerly enjoyed by the tribal chiefs, the king was the central figure in the new state apparatus. It was through him that the ruling class retained its hold over the minds of the people. He was presented to them as a god, who re-created the world in ritual year by year and was responsible for maintaining order in nature and society. In one of the festivals, after a piece of ground had been marked out, the king walked across it four times, facing successively the four points of the compass and wearing the red crown of Lower Egypt; then he did the same again, wearing the white crown of Upper Egypt. In another rite he is described as passing through the land and touching its four sides and crossing the ocean to the four sides of heaven. Again, wearing the red crown, he sat between two officials, one on either side of him, who sang a hymn proclaiming his omnipotence, then changed places and sang it again, then stood in front of him and then behind him and then changed places again, repeating the hymn in each position, so that each of them made the proclamation to the four points of the compass. Then, wearing the white crown, the king was escorted in procession to the chapels of Horus and Seth, where a priest handed him a bow and arrows. After shooting four arrows to the four points, he was enthroned four times, facing in turn the four quarters. In this way he established his claim to rule the world.

In the ruling class of this epoch, therefore, we observe, on the one hand, far-reaching advances in technical knowledge, and, on the other, the elaboration of

primitive myth and ritual as an instrument of class rule. The one trend is scientific and the other religious.

3. *Alienation*

As the chiefs and priests withdrew from manual labour, so the producers became restricted to it, surrendering their surplus product in the form of tribute. Except where it was brought about by the act of conquest, this change was very gradual. The surplus was for a long time regarded as the contribution due from the producers to the common store, of which the chiefs and priests were the accepted custodians. This idea was encouraged by the latter, who consolidated the change by pretending that there had been no change at all. The result was the alienation of labour. The labourer had handed over to others both his product and his productive activity, that is, the activity which constituted his essential humanity. That part of his nature which is specifically human is no longer his; all that is his is what he shares with the animals: 'What is animal becomes human and what is human becomes animal' (EPM 73). For him, labour is no longer 'life's prime need', but merely a means to an end: 'Life itself appears as a *means* to life' (EPM 75).

Alienation reaches its extreme point in slavery. The slave differs from the free worker in that he has alienated not only his labour but his body. Both belong to others. Both, therefore, form part of the objective reality with which he is confronted as subject. The subject expresses itself by denying the object, and this it does by inventing the illusory antithesis of body to soul. Human nature is believed to be divided against itself, one part being mortal and the other divine. The soul is by rights the ruler and master, but in this life it is temporarily enslaved to the body. In the life to come it will be set free. Thus, life is death and death is life. Such was the mystical doctrine of the soul as it was taught in the Orphic and Pythagorean fraternities of ancient Greece.

Such mystical inversions of reality lie at the root of all religion :

Man is the world of man, the state, society. This state, this society, produce religion, a reversed world consciousness, because they are a reversed world. Religion is the general theory of that world, its encyclopaedic compendium, its logic in popular form, its spiritualistic *point d'honneur*, its enthusiasm, its moral sanction, its solemn completion, its universal ground for consolation and justification. It is the fantastic realisation of the human essence, because the human essence has no true reality. . . . Religious distress is at the same time the expression of real distress and the protest against real distress. Religion is the sigh of the oppressed creature, the heart of a heartless world, just as it is the spirit of a spiritless situation. It is the opium of the people. (OR 41.)

There are two trends in the history of religion, the official and the popular. The official cults, controlled by the state, provide a justification for class exploitation; the popular cults, which spring up spontaneously among the masses, provide a consolation for it and a protest against it. As the class struggle develops, the two trends interact. When a new class seizes power, the cult associated with it becomes official and loses its popular character. Both trends are essentially idealistic, but, whereas the official religion is metaphysical, the popular cults preserve in mystical form a naive sense of dialectics.

4. *Materialism and Dialectics*

The transition from tribe to state came much later in Greece than in the Near East, and was based from the beginning on the use of iron. The result was an extremely rapid growth of commodity production, leading to the invention of the coinage and a movement of colonial expansion which penetrated into all corners of

the Mediterranean and gave rise to a flourishing slave trade. Man himself now became an exchange-value, to be bought and sold in the market. The initiative in these developments came from the merchants, who, with the support of the artisans and peasants, overthrew the landed aristocracy and established the rule of democracy. Ancient democracy, from which the slaves were excluded, was short-lived. As slavery 'seized on production in earnest' (C 1.334), the merchants merged with the landowners in a single class of slave-owners, who despised all manual labour as servile. Once again the relations of production had become a fetter on the productive forces.

These were the conditions that gave rise to ancient Greek philosophy.

The earliest philosophers, Thales and Anaximander, belonged to Miletus, the most prosperous of the new city-states on the Aegean coast of Asia Minor. They were members of a mercantile aristocracy, that is, a group of landowning families which had turned to trade. As members of the old nobility, they had inherited many tribal traditions, some of them acquired through contact with the older civilisations of the Near East. Among these was a corpus of cosmological myths, similar to those discussed in the last chapter, which they reinterpreted as rational hypotheses. Their knowledge of Babylonian astronomy was sufficient to enable Thales to predict the solar eclipse of May 28, 585 B.C. They did not openly oppose religion, but excluded it from philosophy by identifying the divine with the property of spontaneous motion, which they believed to be inherent in matter.

Their cosmological theories start from three premises. First, common origin. The universe has evolved by fission from a single primary substance, which Anaximander called the 'unlimited', that is, undifferentiated. Second, perpetual motion. The primary substance is endowed with a rotary movement, with the result that portions of it fly out to the periphery, where they form an outer ring of fire and an inner ring of air, while other portions

gather at the centre, where they form earth and water, enveloped in the ring of air. Thirdly, the conflict of opposites. The process just described is a perpetual struggle, in which the opposites—hot and cold, wet and dry, light and heavy—encroach on one another, with the result that they are periodically reabsorbed into the undifferentiated primary substance out of which they have emerged. This struggle underlies the cycle of the seasons, and there is also a cosmic cycle, in which the universe is periodically destroyed.

This intuitively dialectical conception of the universe is thus described by Engels :

When we reflect on nature, or on the history of mankind, the first picture presented to us is of an endless mass of relations and interactions, in which nothing remains what, where and as it was, but everything moves, changes, comes into being and passes away. This primitive, naive, yet intrinsically correct conception of the world was that of ancient Greek philosophy, and was first clearly formulated by Heraclitus; everything is and also is not, for everything is in flux, is constantly changing, constantly coming into being and passing away. (AD 26–27.)

Before we come to Heraclitus, we must pause to take account of another philosophical school, opposed to the Milesian.

Pythagoras was the son of an artisan, who emigrated to one of the Greek colonies in southern Italy. There he founded a political party representing the interests of the new merchant class, intermediate between the landed nobility and the peasantry. He and his followers were actively involved in the development of the coinage and were said to have been the first to carry the study of number beyond the needs of trade. His political party was at the same time a religious sect, to which admission was obtained by initiation, with a mystical doctrine similar to Orphism.

The Pythagoreans identified the primary substance

with number, which divided into a series of opposites—odd and even, limited and unlimited, good and bad, light and dark, etc. The conflict between these opposites is resolved through their mutual interpenetration, which results in their fusion. This is the Pythagorean doctrine of the fusion of opposites in the mean. It was applied to mathematics, music, astronomy, medicine and politics. Thus, in politics, the struggle between the nobility and the peasantry was resolved in democracy, which was the rule of the new middle class.

In identifying the primary substance with number, Pythagoras assigned the origin of the material universe to something which was not a material substance at all, but a mental category, an idea. In his doctrine of fusion, he set a limit to the conflict of opposites by implying that it was brought to rest in the mean. These trends point the way to idealism. After the democratic movement had passed its peak, Pythagoreanism became a conservative force, and the doctrine of fusion was interpreted as a formula for class reconciliation.

Heraclitus belonged to the old aristocracy of Ephesus, a city not far from Miletus, where democracy was already in decline. His standpoint was that of the new epoch, in which the principal contradiction lay between the slave-owners and the slaves. He was a bitter opponent of democracy. As against the doctrine of fusion, he put forward his own doctrine of tension, that is, of perpetual conflict, motion and change. All things are in flux; everything is the same and not the same. The world has no beginning and no end. It is timeless and self-regulating. The four elements are transformed successively into one another in portions determined by a ratio of exchange. On this basis there arises a series of cycles—day and night, summer and winter, life and death—and a cosmic cycle in which the world is destroyed alternately by fire and water. In this conception of a self-regulating cycle of perpetual transformations of matter a special place is assigned to fire, which stands to the other forms of matter in exactly the same relation as money stands to

other commodities in its function of universal equivalent : 'Fire is exchanged for all things and all things for fire, just as goods are exchanged for gold and gold for goods'.

Commenting on the 'ever-living fire' of Heraclitus, Lenin remarked : 'A very good exposition of the principles of dialectical materialism' (LCW 38.349.)

5. *Idealism and Metaphysics*

In the work of Heraclitus the primitive materialism of early Greek philosophy received its full and final expression; yet, for this very reason, it was already pregnant with its opposite. His ever-changing yet ever-living fire is an abstraction, and the very regularity of its changes invited the objection that there was really no need to postulate any change at all. This step was taken by Parmenides, a disciple of Pythagoras who broke away from his master.

Parmenides asserted that motion, change, conflict, coming into being and passing away—all these things are illusions of the senses. That which exists—the One, as he called it—is motionless, unchanging, timeless, free from contradictions, to be comprehended only by reasoning, not by sensory perception. In putting forward this metaphysical doctrine of 'pure being' Parmenides issued a direct challenge to his predecessors, who had all assumed without question the reality of motion and change. His philosophy, in which the true relation between matter and mind is turned upside down, expressed in an extreme form the 'false consciousness' of a community in which, with the development of a monetary economy, social relations had passed beyond man's comprehension.

The work of Parmenides and his followers—the Eleatics, as they were called—precipitated a crisis, out of which, after a prolonged controversy, there emerged an open conflict between materialism and idealism.

On the materialist side, Anaxagoras argued that the

world is composed of an infinite number of 'seeds', each of which contains within itself all the opposites in different proportions; and that there was another seed, called Mind, finer and purer than the rest, which penetrates the others, mixing them up and sifting them out and so causing the process which men mistakenly describe as coming into being and passing away. This was an attempt to vindicate the reality of the perceptual world without falling into the pitfalls of Eleatic logic; but the Eleatics replied that the seeds of Anaxagoras could only be regarded as real if they were endowed with the properties of the Parmenidean One. This was the starting-point of the Atomic Theory. Taking the Eleatics at their word, Leucippus, the forerunner of Democritus and Epicurus, postulated the existence of an infinite number of atoms, indivisible and indestructible, moving through space, colliding and combining to form the world, including ourselves. This theory was destined, after many centuries, to provide a conceptual framework for modern physics.

Meanwhile, following Pythagoras and Parmenides, Plato (428-348) put forward his Theory of Ideas. The material world does exist, but only as an imperfect copy of the ideal. Being in constant motion, it is not fully knowable. True knowledge pertains only to the world of ideas, which is motionless, immutable, divine. Plato is the acknowledged father of philosophical idealism. By joining issue with the materialists on the relation between mind and matter, between spirit and nature, he posed the question which has dominated philosophy ever since :

The answers which philosophers gave to this question split them into two great camps. Those who asserted the primacy of spirit to nature, and therefore in the last instance assumed world creation in one form or another—and among the philosophers, Hegel for example, this creation often became even more intricate and impossible than in Christianity—comprised the camp of idealism. The others, who

regarded nature as primary, belong to the various schools of materialism. (ME 3.346, cf. LCW 14.99.)

Can the work of these early Greek philosophers be regarded as scientific? Certainly, it is guided by a conscious endeavour to provide a rational explanation of the world, free from superstition and dogma, and in that respect it marks a great advance on Babylonian and Egyptian thought. On the other hand, it is almost entirely speculative, showing little regard for observation or experiment. For this reason it is called natural philosophy rather than science.

Within a few years of Plato's death, the Greek city-states were overrun by Alexander of Macedon, whose spectacular conquests threw the whole of the Near East open to Greek trade. There followed a fresh outburst of economic and cultural growth—the Hellenistic period—which was brought to an end by the Romans. Under Roman rule, having expanded to the limits of its military strength, the ancient slave-state entered on its last phase of stagnation and decay.

The Hellenistic period is dominated by the figure of Aristotle (384–322 B.C.). He was the last of the great philosophers, except Epicurus, and the first great scientist. As a philosopher, he was an idealist. He believed in a divine being, the First Mover, who has imparted form and motion to matter, which in itself is formless and motionless; he believed that body stands to soul and matter to mind in the same relation as a slave stands to his master; he believed that the Greek city-state, based on slave-labour, which was dissolving before his eyes, was the only form of social organisation appropriate to civilised man. Within this idealist framework, however, he shows himself to be in many respects a materialist. As against Plato, he held that A is not-B and yet may contain the potentiality of becoming B, and that there is no such thing as 'house' as distinct from actual houses: that is to say, the *idea* of a thing exists only as a mental image of the thing which it denotes. As a scientist, he

conducted systematic researches in biology, zoology, botany, economics, politics, history, literature and logic. In his zoological treatises he classifies hundreds of species on the basis of specimens collected by himself and his pupils. His analysis of money is without parallel in antiquity. He is described by Marx as 'the great thinker who was the first to analyse so many forms, whether of thought, society or nature, and among them the form of value' (C 1.59).

In the Graeco-Roman period natural philosophy came to a dead end. Accepting the established order in society and nature, the philosophers of this period turned their attention to ethics, by which they understood the self-discipline required by a man of leisure, whose material wants were provided by his slaves, to lead a quiet life devoted to intellectual pursuits, indifferent to the sufferings of all but his personal friends. This was the outlook of a class that had lost all confidence in the future.

The earliest Christians were poor freemen and slaves, who placed their hopes of deliverance in Christ's kingdom. Later, taken over by the state, the new creed was reconstructed as an all-embracing theological system, in which matter was subordinated to spirit, body to soul, reason to faith. But this system of ideas was no more eternal than the social system which it was designed to protect. Already in the thirteenth century the first stirrings of bourgeois materialism were making themselves felt within the bosom of the Church itself :

Materialism is the natural son of Great Britain. Already the British schoolman, Duns Scotus, was asking whether it was possible for matter to think. In order to effect this miracle he took refuge in theology, that is, he made theology preach materialism. (HF 172.)

*From Magic to Art*1. *Mythology and Art*

Mythical thinking is the mode of thinking characteristic of primitive man. It is perceptual, subjective, plastic. Some tribespeople see an aeroplane for the first time, and there appears in their myths the figure of a big white bird. This is 'thinking in complexes', like a child. In class society, as we have seen, it gives place, on the one hand, to rational and scientific thinking, and, on the other, to religious dogma. In addition to these two developments, there is a third—aesthetic thinking, in which myth becomes the raw material of art.

In some unfinished notes Marx comments on the connection between mythology and art :

We know that Greek mythology is not only the arsenal of Greek art, but also its basis. . . . All mythology subdues, controls and fashions the forces of nature in and through the imagination; it disappears therefore when real control over those forces is established. . . . Greek art presupposes Greek mythology, in other words, that natural and social phenomena are already assimilated by the imagination of the people in an unintentionally artistic manner. (GR 110.)

Commenting on this passage, Mao Tse-tung wrote :

The myriads of changes in mythology (and also in nursery tales) delight people because they imaginatively picture man's conquest of the forces of nature, and the best myths possess 'eternal charm', as Marx

put it; but myths are not built out of the concrete contradictions existing in given conditions and therefore are not a scientific reflection of reality. That is to say, in myths or nursery tales the aspects constituting a contradiction have only an imaginary identity, not a concrete identity. (MSW 1.341.)

Mythology operates 'in and through the imagination'. The contradictions which it purports to resolve are unreal. In primitive society, as the oral counterpart to the ritual act, the myths are credited with the magical power of controlling reality by a mere word of command, so to speak; but this is an illusion—a childlike act of make-believe, in which the fantasy is mistaken for the reality. Later, in class society, as the myths are re-fashioned into art—in the drama, for example—the element of illusion is still present, but now it is *objectified*: that is to say, the participants are aware of it as an illusion. The world of art is a world of *conscious* make-believe; and therefore, while he takes his material from the realm of perceptual knowledge, the artist's thinking is at a higher level. His function is to lead his fellow-men into a world of fantasy, where they find emotional release and so draw fresh strength for the struggle with reality.

In myth natural and social phenomena have been assimilated by the people 'in an unintentionally artistic manner'. Told and retold by accomplished storytellers over many generations, they have been continuously remoulded, and so, without attaining the level of conscious art, they have been brought to what one might call a state of natural perfection. At such recitals the listeners fall into a trance, while the minstrel, who improvises freely, is moved to surpass himself by the stimulus of their response. The following is an account of a Russian ballad recital:

Utka coughed. Everyone became silent. He threw his head back and glanced round with a smile. Seeing their impatient, eager looks, he at once began to sing.

Slowly the face of the old singer changed. All the cunning disappeared. It became childlike, naive. Something inspired appeared in it. The dovelike eyes opened wide and began to shine. Two little tears sparkled in them; a flush overspread the swarthy cheeks; his nervous throat twitched. He grieved with Ilya of Murom as he sat paralysed for thirty years, gloried with him in his triumph over Solovey the robber. All present lived with the hero of the ballad, too. At times a cry of wonder escaped from one of them, or another's laughter rang through the room. From another fell tears, which he brushed involuntarily from his lashes. They all sat without blinking an eye while the singing lasted. Every note of this monotonous but wonderfully gentle tune they loved. (Quoted by H. M. and N. K. Chadwick, *The Growth of Literature*, 3.240-1.)

This minstrel was inspired, and his audience spellbound. When we speak of a poet as inspired, it is only an empty phrase, but among primitive peoples the word carries its full meaning—filled with the breath of God, endowed with the special gift of casting over his fellow-men the magic spell of poetry.

What we have to say in the present chapter applies in principle to the arts in general; but in order to bring the subject within manageable compass, we shall concentrate our attention on the art of poetry. First, we shall discuss the social and psychological basis of poetical inspiration; then we shall examine the nature of poetical speech, as compared with ordinary speech; and finally we shall return to the question of poetical form, which has already been touched on in Chapter III.

2. *Poetical Inspiration*

In pre-class society, and in the earlier stages of class society, the poet is universally regarded with the same veneration that is popularly accorded to a prophet or a

priest. His blessing and his curse are believed to have a special potency, derived from his intimacy with the spirit world. When he is composing poetry—which he does extempore before an audience, like Utka in the passage quoted above—the words come to him without conscious effort on his part, as though they were not his words at all but the voice of a god or spirit speaking through him. He is, in a word, 'possessed'.

During the transition from tribe to state, the primitive consciousness is subject to social stresses, which manifest themselves in various types of nervous disorder analogous to hysteria, epilepsy and schizophrenia. Involving as they do the loss of conscious control, these disorders give rise to the belief that a god or spirit has entered the patient's body and taken possession of it. This is the literal meaning of our word 'enthusiasm', which denoted originally the phenomenon of possession. The patient was cured by a magician—a shaman, medicine-man, witch-doctor or yogi, as he is variously called. He exorcised the possessing spirit by means of a magical rite in which he pronounced the spirit's name and so finally compelled it to release its victim.

These magicians are organised in secret fraternities, to which admission is obtained by a special rite of initiation. The initiates are chosen from among those who have already shown a propensity to some kind of mental disorder. In particular cases the fraternity is associated with one or other of the handicrafts, such as iron-working, whose secrets they guard from the uninitiated. In general, they have a mystical character, like the forms of popular religion discussed in the last chapter; and the ritual is orgiastic and ecstatic. Under the influence of their leader they induce in themselves—often by means of drugs—various forms of disturbed behaviour, including maniacal acts, such as tearing live animals to pieces or even slaughtering one of themselves, the rite being followed by a sacramental feast. In other rites they pretend to descend into the underworld or to

fly up to heaven. The shamanistic performances of the Tatars are thus described :

The subjects are religious in all cases, and represent the journey of the shaman, sometimes to the realm of Erlikh Khan, the god of the underworld and of the dead, sometimes to the upper regions, the several superimposed planes of Heaven, and even to Olgan himself, the god of one of the highest heavens. (H. M. and N. K. Chadwick, *The Growth of Literature*, 1932-40, 3. 199.)

Ritual of this kind is essentially a hypertrophy of primitive magic, which at this stage of society has become a full-time occupation; and, being mimetic, it is inherently dramatic. At a later stage, with the development of more rational forms of medical treatment, these magical fraternities shed their primitive functions and become travelling guilds of actors. They still have a leader, however, who interprets the performance to the onlookers, and in this way the former magician becomes a poet-actor. This is the origin of drama.

The ritual origin of ancient Greek drama can be reconstructed in some detail. It is known, too, that the nucleus of West European drama was the medieval passion-play associated with the Easter festival. The origins of oriental drama have still to be investigated, but there can be no doubt that they, too, are to be found in primitive ritual.

3. *Poetical Speech*

Let us return to the labour-song. The spinner sings as she spins. In doing this she is not merely conforming to an established custom. She finds it hard to spin without singing. The song helps her to concentrate her attention on the manual task. That is its objective function. In the primitive consciousness, however, which confuses subject and object, it appears as a medium through

which she imposes her will on the object. It is, in other words, a spell or incantation.

An incantation is a song sung for the express purpose of effecting a change in the external world by magical means. Such songs are not confined to the labour-process. They are especially common in medicine. The following is an example from the Trobriand Islands :

It passes, it passes.
The breaking pain in the thighbone passes,
The ulceration of the skin passes,
The big black evil of the abdomen passes,
It passes, it passes.

The subject of this poem is not what we should call poetical, but the form is. The language of these incantations, we are told, is distinguished by its rhythmical, phonetic and metaphorical effects. These three elements—rhythm, melody, and metaphor or imagery—constitute the affective aspect of speech as distinct from its cognitive aspect. All three are present in common speech in a greater or lesser degree according to the mood of the speaker. When the affective aspect becomes dominant, common speech passes into poetry.

A similar difference may be observed if we compare primitive languages with our own. The speech of savages has a strongly marked rhythm, accompanied by gesticulation, and a lilting melodic accent. In some languages the accent is so musical, and so vital to the meaning, that when a song is composed the tune is largely predetermined by the natural melody of the spoken words. Thus, the affective aspect is more prominent in primitive speech than it is in ours, and necessarily so, because the cognitive aspect is less highly developed.

Of these three elements the first has already been discussed. -It has been shown in Chapter III that rhythm is derived from the labour-process. The same is true of melody, which is inseparable from rhythm. In poetry this element survives in the form of rhyme,

that is, the regular repetition of a syllable or vowel-sound coinciding with the rhythmical beat. In most European languages the rhymes are confined to the end of the verse or couplet, but in some, such as Irish, they form a melodic pattern which runs right through the quatrain. Other melodic effects, akin to rhyme, are assonance and alliteration.

There remains the third element—imagery and metaphor. An image is a vivid representation of concrete reality; a metaphor is an image formed by representing one object or process in terms of another. Such transferences are deeply rooted in common speech: the mouth of a river, of a cave, of a jar; the leg of a table; the eye of a needle; the leaf of a book; the bridge of a violin; the bonnet and the boot of a car. Some of these expressions are very old; others are quite new. Things which are quite different in themselves are associated on the strength of some purely perceptual relation between them. This is a form of associative complex, which has been preserved in all languages as a semantic procedure.

The use of metaphor is still an active element in common speech (the kettle is singing; a threadbare excuse; nip the danger in the bud) but it is specially characteristic of poetical speech. The poet *thinks* in images. He uses metaphor systematically in such a way that conceptual thinking is overlaid with imagery. A logical sequence of ideas is presented to us through a series of apparently unconnected images. Their emotional impact is all the greater because the connecting link is felt rather than understood. All the great masters of imagery use it in this way. Here it will suffice to illustrate the point from one of Shakespeare's sonnets (no. 12):

*When I do count the clock that tells the time,
And see the brave day sunk in hideous night;
When I behold the violet past prime
And sable curls all silver'd o'er with white;*

*When lofty trees I see barren of leaves,
Which erst from heat did canopy the herd,
And summer's green, all girded up in sheaves,
Borne on the bier with white and bristly beard:*

*Then of thy beauty do I question make,
That thou among the wastes of time must go,
Since sweets and beauties do themselves forsake,
And die as fast as they see others grow,*

*And nothing 'gainst Time's scythe can make defence
Save breed, to brave him when he takes thee hence.*

First, a few words about sonnet form. The sonnet consists of fourteen verses (lines) conforming to a prescribed pattern of rhythm and rhyme. This is the traditional framework. At the end of the second quatrain there is nearly always a pause in the sense, which divides the poem into two parts, known as the octet and the sestet. The octet states certain conditions, the sestet the consequences that follow from them. The two parts may therefore be described in grammatical terms as protasis and apodosis, or in musical terms as announcement and respension. This is binary form.

This particular sonnet belongs to a sequence, which may be described as a theme with variations. The theme is the poet's appeal to his friend to marry. It is the variations, rather than the theme itself, that command our attention.

The poet presents a series of images, which culminate at the end of the octet. Beginning at the level of common speech, the tone rises slowly, sustained by the alliteration, unobtrusive but persistent, and by light touches of metaphor—'sunk' (a ship?) and 'silver'd o'er' (the back of a mirror?). At the end of the first quatrain we find that we have been conducted without noticing it through the successive time-cycles that make up a man's life—the hour, the day, the year, and the span from youth to age. Then, in the second quatrain, we behold a vision of the English countryside, as summer

turns to autumn in the woodland meadows and the fields of ripening corn, leading to the moment at which an old man's dead body is carried to the grave. (It was the custom for the reapers to carry the last sheaf, personified as John Barleycorn, in funeral procession like a corpse.) That completes the octet. In the sestet, after raising this spectre of old age and death, the poet spells out the logic of what we have seen, with one more image in the final couplet ('scythe') to drive the lesson home: only by begetting a son can his friend safeguard himself against Time the reaper.

This sonnet serves to illustrate another point. The allusion to the funeral turns on the one word 'bier', which is thrown into relief by the alliteration and the word-play 'bier'—'beard'. It could hardly have been less explicit—a passing glimpse, as it were. That makes it all the more effective. In the poet's day no more was needed to recall a sight familiar to all; but the modern reader is liable to overlook it altogether, because the custom has died out. It is the critic's business to identify such allusions, and he will be best able to do this if he is himself involved in the life of the people.

Thus, we see that the distinctive characteristics of poetical speech are all present in common speech, being inherent in speech as such; but in poetry they have been elaborated into a special mode of thinking, which is essentially popular and at the same time highly sophisticated, being a vehicle of conscious art. In contemporary bourgeois society, in which the poet has lost touch with the people, the underlying unity of poetical and popular speech has been to a large extent effaced; and, where it still survives, it is the people, not the poets, who have preserved it.

Among the peasantry, whose mode of production is a legacy from pre-capitalist society, the relationship between poet and people is so close that his craft may almost be regarded as a communal accomplishment. His neighbours are less practised in it than he is, but they speak with a natural eloquence, and under the stress of

emotion they may break spontaneously into verse. To that extent they are all poets. The following incident is recalled from a village (now deserted) on the west coast of Ireland.

An old woman had just filled her buckets at the village well, and stood looking out over the Atlantic. Her husband was dead, and her seven sons had all been 'gathered away', as she expressed it, to Springfield, Massachusetts. A few days before a letter had arrived from one of them, urging her to follow them, so that she might end her days in comfort, and promising to send her the passage money, if only she would agree. All this she related in detail, and then she described her life—the trudge to the turf stack in the hills, the loss of her hens, the dark, smoky cabin. Then she spoke of America as she imagined it to be—an Eldorado where you could pick up the gold on the pavements, and the railway journey to Cork, the transatlantic crossing, and her longing that her bones might rest in Irish soil. As she spoke, she grew excited, her language became more fluent, more highly-coloured, rhythmical, melodious, and her body swayed in a dreamy, cradle-like accompaniment. Then she picked up her buckets with a laugh, bade me good-night, and went home.

This unpremeditated outburst from an illiterate old woman with no artistic pretensions had all the characteristics of poetry. Only one point calls for comment.

These peasants lived on remittances from their children in the United States, and consequently that country came to be associated in their minds with the Elysium of Irish mythology, the legendary Land of the Young, which was also located beyond the Atlantic—a land where the trees were laden with fruit and there was plenty of honey and wine. The last of the Fenians, Usheen, went there at the invitation of Niamh, daughter of the King of Youth, but after many years, overcome with homesickness, he returned, and was stricken with old age as soon as he set foot on Irish soil. All this was present in the mental background of that peasant woman.

4. *Conscious Art*

Just as art is derived from magic, so the artist exercises a social function which resembles that of the primitive magician. He is the spiritual leader of his fellow-men. This idea was put forward by the poets and critics of the rising bourgeoisie in opposition to the aristocratic conception of art as mere entertainment. Thus, according to Goethe, the poet, being inspired, is able to express on behalf of his fellow-men those deeper joys and sorrows which they cannot express for themselves. It is the Poet speaking :

*Nature has given us tears, the cry of pain
When man can bear no more, and most of all
To me—she has given me melody and speech
To make the full depth of my anguish known;
And when man in his agony is dumb,
I have God's gift to utter what I suffer.*

(Tasso 3432.)

The same idea was expressed by Belinsky as follows :

The times of rhymed rattles have gone, never to return; no value is now attached to cheap sensations and sentimentality. What is now demanded instead of either is profound feelings and ideas expressed in artistic form, whether in rhyme or not—that makes no difference. To achieve success in poetry today, talent alone is not enough—one must also be educated in the spirit of the times. The poet can no longer live in a world of dreams; he is already a citizen of the kingdom of the reality of his time. The entire past must live in him. Society no longer wants him to be an entertainer, but a representative of its spiritual, ideal life; an oracle who can answer the most difficult questions; a physician who discovers in himself, before discovering them in others, man's common pains and sufferings, and heals them by reproducing them in poetic form. (V. G. Belinsky, *Selected Philosophical Works*, p. xlv.)

Let us now analyse three poems, widely separated in place and time, and see how even the most sophisticated poetry is still charged with magical effects.

Sappho (630-580 B.C.) belonged to the mercantile aristocracy of Lesbos, which in her time was one of the most advanced of the Aegean city-states. She was the principal of what we should call a finishing-school for young ladies. More precisely, it was a religious sodality, dedicated to Aphrodite, in which girls belonging to the nobility were prepared for marriage—a cult society of the kind already described. Her poems were nearly all songs accompanied on the lyre or flute. The following is addressed to a girl who has failed to reciprocate her love. The translation reproduces the metre of the original :

*Aphrodite, goddess enthroned in splendour,
Child of Zeus Almighty, immortal, artful,
I beseech thee, break not my heart, O Queen, with
sorrow and anguish!*

*Rather come, O come as I often saw thee,
Quick to hear my voice from afar, descending
From thy Father's mansion to mount thy golden
chariot drawn by*

*Wings of sparrows fluttering down from heaven
Through the cloudless blue; and a smile was shining,
Blessed Lady, on thy immortal lips as standing beside
me*

*Thou didst ask: 'Well, what is it now? what is that
Frantic heart's desire? Do you need my magic?
Whom then must I lure to your arms? who is it,
Sappho, that wrongs you?*

*On she flies, yet soon she shall follow after;
Gifts she spurns, yet soon she shall be the giver;
Love she will not, yet, if it be your will, then surely
she shall love?.*

*So come now, and free me from grief and trouble,
Bringing all to pass as my heart desires it!
Answer, come, and stand at my side in arms, O
Queen, to defend me!*

The metre is the so-called Sapphic stanza, which Sappho invented by adapting to the requirements of a monody a much larger strophe designed for choral performances. The first sentence ('Aphrodite . . . artful') consists of two identical phrases. The second begins by repeating the first ('I beseech . . . Queen, with'), but then, by the musical device known as 'overlap', it passes into a cadence ('Queen, with sorrow and anguish'), which brings the stanza to a close. This is binary form, with the second section compressed so as to give an impression of finality.

Turning to the content, we find that the thought running through the poem is handled in such a way that this, too, has a rhythmical movement, independent of the metrical form. Sappho begins by stating her prayer (A); she goes on to recall how the goddess had answered similar prayers in the past (B); and she concludes by repeating the prayer (A). This is ternary form (A-B-A). The prayer opens negatively, despondently; it ends positively, confidently, as though, thanks to what has happened in between, a favourable answer were assured.

What does happen in between? Sappho reminds the goddess of the past: 'If ever before . . . , so now'. This was a ritual formula. When you prayed to the gods, you reinforced your appeal by reminding them of previous occasions on which you had received their help or earned their gratitude; and ritual takes us back to magic, in which the dancers enacted in fantasy the fulfilment of the desired reality. That is what Sappho does here, except that there is no action, no physical movement, only a flight of the imagination. She beseeches the goddess to come; envisages her as coming, sees her and hears her voice; and then, inspired by this imaginative effort to greater confidence, she renews her prayer. This

is ternary form handled dynamically in the manner of a Hegelian triad : thesis—antithesis—synthesis (A—B—A').

If the form of prayer is based on ritual, so too is the image of the goddess's descent. The ascents and descents of the gods to and from heaven are a prominent feature of the Homeric poems. Their ritual origin may be seen in Minoan gem engravings, in which the goddess appears suspended in mid-air, while the worshippers greet her with uplifted arms. Being herself a worshipper of Aphrodite, Sappho must have shared in such beliefs, and to that extent she was herself involved in the illusion.

My second example is a sonnet by Keats :

*Bright star, would I were steadfast as thou art,
Not in lone splendour hung aloft the night,
And watching with eternal lids apart,
Like Nature's patient, sleepless Eremite,*

*The moving waters at their priestlike task
Of pure ablution round earth's human shores,
Or gazing on the new soft-fallen mask
Of snow upon the mountains and the moors—*

*No, yet still steadfast, still unchangeable,
Pillowed upon my fair love's ripening breast,
To feel for ever its soft fall and swell,
Awake for ever in a sweet unrest,*

*Still, still to hear her tender-taken breath,
And so live ever, or else swoon to death.*

This was Keats's last sonnet, composed shortly before his death at the age of twenty-four. In February 1821 he left England for Italy in a last effort to recover his health. Down the Channel his ship was driven by bad weather into Lulworth Cove, and there he completed this sonnet and wrote it out in a copy of Shakespeare's poems. Four months later he died in Italy of consumption.

'Bright star, would I were steadfast as thou art ...'

This is a conscious wish—the wish of a dying man. His imagination soars. He ascends into the heavens, and from the moon, which from very early times has been an object of mystical worship as a symbol of everlasting life, he looks down on this mortal earth. But the moon is proverbially solitary and remote, and so he is drawn back to the earth, seeking to unite the immortality of the stars with the warmth of human love. But that is impossible. Without death there is no life. We awake abruptly, as if from a dream; yet, thanks to this experience, we have deepened the emotional content of our consciousness and hence also our feeling for our fellow-men. The world is still objectively the same—a world 'where youth grows pale and spectre-thin and dies'; but our subjective attitude has changed.

The imaginary ascent moves in unison with the binary structure, which divides where the descent begins. For the poet, of course, the idea of a journey to the skies is simply a poetical conceit, acceptable because traditional. In fact, however, as we have seen, it is deeply rooted in popular imagination—so deeply as to make itself felt subconsciously. Just as the rhythmical form of the poem vibrates with echoes of collective labour, so the imagery, charged with similar associations, enchants us. It is by playing on such associations, common to all of us, that the poet *socialises* his personal experience and so invests it with a universal value.

My last example is a poem by Mao Tse-tung, dated May 11, 1957.

It is composed in Classical Chinese. The metrical form, which cannot be reproduced in translation, is very strict. There are two stanzas, each with four verses; and each verse contains seven syllables, except the second, which has nine. There is also a prescribed pattern of rhymes and tones. Poems of this form (*tzu*) are based on popular melodies dating from the Later T'ang Dynasty (A.D. 923-935).

The poem was composed for Li Shu-yi, a school-mistress in Changsha, capital of Mao's native province of

Hunan. Her husband, Liu Chi-hsun, a leader of the Hunan Peasants' Association, was killed in battle in 1933. With his name is coupled that of Mao's first wife, Yang Kai-hui, who was executed by the Kuomintang in 1930. These two surnames, Liu and Yang, which are properly clan names, mean 'willow' and 'poplar' respectively. This provides the starting-point of the poem :

*I lost my proud poplar and you your willow.
Poplar and willow, they soar straight up to the ninth
heaven,
And enquire of Wu Kang, What is here?
He offers them cassia wine.*

*Lonely Ch'ang O dances for these good souls,
Spreading her wide sleeves across the boundless sky.
All at once here on earth there is news. The tiger has
been laid low.
Tears fall in a downpour of rain.*

The ninth heaven is the highest. The two souls are welcomed there by Wu Kang and Ch'ang O. Wu Kang offended the gods by trying to make himself immortal. He was imprisoned in the moon and condemned to fell a giant cassia tree, which grew up again as fast as he could cut it down. The wine made from the fruit of this tree was the drink of the gods, and by partaking of it the two souls become immortal. Ch'ang O was a beautiful princess of the Hsia Dynasty (2205-1776 B.C.), who stole the elixir of immortality and became goddess of the moon, but she is lonely there and longs to return to earth. The tiger is Chiang Kai-shek. The tears are tears of joy.

The reader will observe that the ascent of the two souls, occupying the first two verses, is balanced in the last two by the abrupt return to earth and the shower of rain. This imparts to the poem a ternary movement contradicting the two-stanza structure. The idea of a journey to heaven is well established in the Chinese poetical tradition, being recorded as far back as Chu

Yuan, a poet of the Warring States period (436-221 B.C.). Usually, however, it is the poet himself who makes the journey, as Mao remarks in his covering letter to Li Shu-yi:

I am sending you a poem describing an imaginary journey to heaven. It differs from other ancient *tzus* in this style in that the author himself is not the traveller.

Why, it may be asked, does Mao Tse-tung, who elsewhere describes the transformations of mythology as 'childish, imaginary, subjectively conceived' (MSW 1.340), make so much of them in his poetry? The answer is, surely, that as a poet he appreciates their value as an image of man's achievement. The workers and peasants of present-day China are conquering in reality hostile forces which their ancestors were able to subdue only 'in and through the imagination'. The giant cassia tree is dwarfed by the poplar and willow; and there is no news in heaven to be compared with the latest victory on earth, which transforms grief into joy.

Thus, the metrical form and the mythical content of this poem are both very ancient; but within the mythical content there is a political content, and this is entirely new:

Of all things in the world, people are the most precious. Under the leadership of the Communist Party, so long as there are people, every kind of miracle can be performed. (MSW 4.454.)

*Modern Science and Philosophy*1. *The Beginnings of Modern Science*

This is how Engels describes the dawn of modern European science :

Modern natural science . . . dates, like all more recent history, from that mighty epoch, which is known to the Germans as the Reformation (after the national calamity that befell us at that time), to the French as the Renaissance, and to the Italians as the Cinquecento—although it is not fully expressed by any of these names. It is the epoch which had its rise in the first half of the fifteenth century. . . .

It was the greatest progressive revolution that mankind had so far experienced, a time which called for giants and produced giants—giants in power of thought, passion and character, in universality and learning. The men who founded the modern rule of the bourgeoisie had anything but bourgeois limitations. They were all imbued in some degree with the adventurous spirit of the time. There was hardly any man of importance then living who had not travelled extensively, who had not the command of four or five languages, who had not distinguished himself in a number of fields. Leonardo da Vinci was not only a great painter; he was also a great mathematician, mechanic and engineer, to whom the most diverse branches of physics are indebted for important discoveries. Albrecht Dürer was painter, engraver, sculptor, architect; he also invented a system of fortification embodying many ideas taken up later by

Montalembert and the modern science of fortification. Machiavelli was statesman, historian, poet, and also the first modern military writer of note. Luther not only cleansed the Augean stables of the Church, he also cleansed the German language, created modern German prose, and composed the words and melody of that triumphal hymn which became the Marseillaise of the sixteenth century. The heroes of that time had not yet come under the servitude of the division of labour whose restrictive, one-sided effects are so often to be observed in their successors. But what distinguishes them above all else is that almost all of them pursue their lives and activities in the midst of the contemporary movements, in the practical struggle. They take sides and join in the fight, one by speaking and writing, another with the sword, many with both. Hence the fullness and force of character that makes them complete men. (ME 3.41-42.)

The new scientific outlook was formulated by Francis Bacon (1561-1626):

Man is the helper and interpreter of Nature. He can only act and understand in so far as by working upon her and observing her he has come to perceive her order. Beyond this he has neither knowledge nor power. (*Novum Organum* 1.1.)

Man's power is derived from his knowledge of the material world, which he can control in so far as he understands its laws. This is the standpoint of modern materialism. Of Bacon Marx wrote:

The real founder of English materialism and all modern experimental science was Bacon. For him natural science was true science, and physics based on perception was the most excellent part of natural science. Anaxagoras with his *homoeomeria* [particles] and Democritus with his atoms are often the authorities that he refers to. According to his teaching the senses are infallible and are the source of all knowledge.

Science is experimental and consists in applying a rational method to the data provided by the senses. Induction, analysis, comparison, observation and experiment are the principal requisites of rational method. The first and most important of the inherent qualities of matter is motion, not only mechanical and mathematical motion, but still more impulse, vital life-spirit, tension. . . . In Bacon, its first creator, materialism contained, latent and still in a naive way, the germs of all-round development. Matter smiled at man with poetical, sensuous brightness. (HF 172.)

Thus, Bacon's work provides a direct link between ancient and modern materialism.

In the scientific work of these Renaissance pioneers theory is united with practice. That is the hallmark of experimental science. For the theologian and the philosopher, the concrete phenomena of the material world are of interest only as serving to illustrate eternal truths already established, whether by divine revelation or by pure thought; for the scientist the supreme authority rests, first and last, with the facts. He too, of course, is subject to the ideological limitations of his class, but in the conduct of his experiments he thinks and acts as a materialist. Starting from the results of previous experiments, he frames a hypothesis, which he tests by further experiment; and this becomes the basis for a new hypothesis, to be tested in the same way at a higher level. This is the procedure that had been pursued, at a lower level, by countless generations of craftsmen, working by trial and error; and indeed it has its roots in the labour-process, in which primitive man re-shaped matter in accordance with a preconceived image formed as a result of previous practice. Now this procedure is consciously elaborated so as to bring the entire universe within the range of man's understanding :

For three hundred years the Copernican system was a hypothesis with a hundred, a thousand, ten

thousand chances to one in its favour, but still always a hypothesis. But when, by means of the data provided by this system, Leverrier not only deduced the necessity of the existence of an unknown planet, but also calculated the position in the heavens which this planet must necessarily occupy, and when Galle actually found this planet, the Copernican system was proved. (ME 3.347.)

There was, however, in practice no clear-cut division between theology and philosophy or between them and science. Theology and philosophy were both speculative; but, whereas in theology speculation was restricted by religious dogma, in philosophy it was free. Philosophy often appears as a sort of secular theology, fulfilling the social function of religion in a form acceptable to those who, under the influence of scientific knowledge, can no longer believe in an anthropomorphic God. Some bourgeois scientists have been religious believers, confining their scientific outlook to their special branch of science; many more have held philosophical views of one kind or another; very few have had a conscious grasp of dialectics.

2. *The New Metaphysics*

In general, scientific thinking has developed in opposition to metaphysics. This term covers all those systems of thought, whether theological or philosophical, idealist or materialist, which are undialectical. Metaphysical thinking is described by Engels as follows :

To the metaphysician, things and their mental images, ideas, are isolated, to be considered one after the other apart from each other, rigid, fixed objects of investigation given once for all. . . . For him a thing either exists or it does not exist; it is impossible for a thing to be itself and at the same time something else. . . . In considering individual things he loses sight of their connections; in contemplating their

existence he forgets their coming into being and passing away; in looking at them at rest he disregards their motion. . . . (AD 27-28.)

For further light on the nature and origin of metaphysical thinking we must turn back once again to Marx's analysis of commodities :

If then we leave out of consideration the use-values of commodities, they have only one common property left, that of being products of labour. But even the product of labour has undergone a change in our hands. If we make abstraction from its use-value, we make abstraction at the same time from the material elements and shapes that make the product a use-value; we see in it no longer a table, house, yarn, or other useful thing. Its existence as a material thing is put out of sight. Nor can it any longer be regarded as a product of the labour of the joiner, the mason, the spinner, or of any other definite kind of productive labour. Along with the useful qualities of the products themselves, we put out of sight both the useful character of the various kinds of labour embodied in them and the concrete forms of that labour; there is nothing left but what is common to them all; all are reduced to one and the same sort of labour—human labour in the abstract. (C 1.38.)

With this process of mental abstraction, underlying the concept of value, may be compared the analytical procedure of the metaphysical philosopher, also described by Marx :

Is it surprising that, if you let drop little by little all that constitutes the individuality of a house, leaving out first of all the materials of which it is composed, then the form that distinguishes it, you end up with nothing but a body; that, if you leave out of account the limits of this body, you soon have nothing but a space; that if, finally, you leave out of account the dimensions of this space, there is ab-

solutely nothing left but mere quantity, the logical category? If we abstract from every subject all the alleged accidents, animate or inanimate, man or things, we are right in saying that in the final abstraction the only substance left is the logical categories. . . . If all that exists, all that lives on land and under water can be reduced by abstraction to a logical category—if the whole of the real world can be thus drowned in a world of abstractions, the world of logical categories, who need be surprised at it? (PP 118.)

By dint of constant repetition the buyers and sellers of commodities learn to handle the concept of value without conscious effort but only by rule of thumb. They are not conscious of the process by which the concept has been formed: 'The intermediate steps of the process vanish in the result and leave no trace behind' (C 1.92). To them, therefore, the abstraction appears, not as a mental reflex of social practice, but as an autonomous category of 'pure thought'. This is the 'commodity fetishism' or 'false consciousness' which manifests itself in philosophy as metaphysical thinking.

All philosophical systems are metaphysical in so far as they treat matter as an abstraction without regard to its concrete reality. Metaphysical thinking is speculative, not experimental. Theory has been cut off from practice. Scientific thinking, on the other hand, in so far as it frees itself from metaphysics, is intuitively dialectical, just as the natural processes which it seeks to control are dialectical. The scientist too, of course, deals in abstractions, but his theories are constantly tested in practice. These two trends, the dialectical and the metaphysical, express the basic contradiction in the thought of class society, corresponding to the contradiction between the productive forces and the relations of production.

In European thought, metaphysics first appears in the Parmenidean One, as explained in Chapter V. It

appears again in the abstract God and the equally abstract Man of Christian theology :

The religious world is but the reflex of the real world. And for a society based on the production of commodities, in which the producers in general enter into social relations with one another by treating their products as commodities and values, whereby they reduce their individual private labour to the standard of homogeneous human labour—for such a society Christianity, with its cultus of abstract man, more especially in its bourgeois developments—Protestantism, Deism etc.—is the most fitting form of religion. (C 1.79.)

Thanks to Copernicus and Kepler, the medieval world view of a motionless earth situated at the centre of the universe, had been shattered; but, although Bacon had pointed the way forward, his lead was not followed. Under the influence of the Churches, Catholic and Protestant, the philosophical and scientific thinking of the ensuing period was still dominated by metaphysics. In philosophy, the separation of mind and matter opened the way to subjective idealism, in which matter was reduced to mind, and to metaphysical or mechanical materialism, in which mind was reduced to matter. In physics, following Democritus and Epicurus, Newton (1642–1727) constructed a material universe which was governed by the laws of mechanics, but enclosed it within a wider reality in which God still reigned. In biology, following Aristotle, Linnaeus (1707–78) classified the species of animals and plants on the assumption that they had remained fixed and unalterable from the time of their creation.

Thus, in contrast to the early Greek philosophers, the scientists of this period saw the world, not as an organic process of coming into being and passing away, but as a closed mechanical system, incapable of development :

The natural science of the first half of the eight-

eenth century stood far above Greek antiquity in knowledge and in the sifting of material, but far below it in the ideological mastery of its material, in its general outlook on nature. For the Greek philosophers the world was essentially something that had emerged from chaos, had developed, had come into being. For the natural scientists of this period it was something ossified, unalterable, and for the most part made at one stroke. Science was still deeply enmeshed in theology. Everywhere it sought and found as the ultimate thing an impulse from outside which was not to be explained from Nature herself. (ME 3-45.)

3. *The New Dialectics*

The conflict between materialism and idealism in bourgeois philosophy was complicated by the uneven development of the bourgeois revolution. In England it took place in 1649, in France in 1789, in Germany not till 1848. At the end of the period, long after the English and French bourgeoisie had won state power, the German and Austrian bourgeoisie was still under feudal rule. In England, the main philosophical trend was in the direction of idealism and agnosticism (Berkeley, Hume); France was dominated by metaphysical materialism (Helvétius, Diderot), and Germany by idealism (Leibniz, Kant, Hegel). But everywhere philosophy was charged with a new sense of dialectics, inspired both by the revolutionary movement and by the latest scientific advances. It was in Germany, where the contradictions were most acute, that the final rupture came.

Kant (1724-1804) recognised that matter exists and acts on our minds through the senses, but maintained that mind consists of logical categories, not derived from matter, within which we arrange the data of sense perception. Thus, the order which we perceive in nature does not really belong to it but has been imposed on it by mind. Objective reality—the 'thing-in-itself'—is unknowable.

Nevertheless, it was Kant who put forward, in his early years, the hypothesis of a solar system which had evolved in time from a rotating nebular mass. This was the concept of evolution, which was already being applied in botany and zoology by Erasmus Darwin (the grandfather of Charles) and in the study of man by Rousseau (1712-78). In Rousseau and other thinkers of the French Enlightenment it appears as the idea of human progress and perfectibility—an idea which was developed later into 'utopian' socialism. In his sense of dialectics Rousseau anticipated Hegel. (AD 155-57.)

As against Kant, Hegel (1770-1831) asserted that the world is one and fully knowable. Knowledge is a process which advances from the contradictions present in the appearance of things to their resolution in the essence, and from the contradictions present in one stage of development to their resolution in the next. In every phenomenon there arises an internal contradiction which drives it forward to the next stage of development. The new stage negates the old and is in turn itself negated. This is what Hegel called the 'negation of the negation'. (The term is unsatisfactory, because it over-emphasises the negative aspect. If B negates A, then A affirms what B negates; if A' is the negation of B, it is also the reaffirmation of A. Each stage is both affirmative and negative.) Hegel applied this dialectical logic with encyclopaedic knowledge to all branches of science, natural and historical, including philosophy itself; only, being an idealist, he regarded mind, not matter, as the sole reality. The evolution of the material world was for him a process of thought—the unfolding of 'the Idea' or 'absolute Spirit', as of God thinking to himself.

Thus, although it embodied a profound sense of dialectics and a wealth of scientific knowledge, Hegel's system as a whole was idealist and metaphysical (LCW 2.21). Theory was divorced from practice. It marks the stage at which the categories of bourgeois thought,

already strained by the advancement of science, were about to be shattered by the proletariat.

For a full understanding of Hegelian dialectics it is necessary to consider the history of the term itself. The word 'dialectic' (Greek *dialektiké*) means properly the art of discussion. The terms 'contradiction' and 'negation' also refer properly to discussion. Why should the dialectics inherent in the nature of things be described as though it were an exchange of ideas?

Among the ancient philosophers, it was Heraclitus who possessed the deepest understanding of dialectics, but he did not formulate a dialectical method. That was done by the followers of Parmenides; and since they were idealists, who regarded the material world as illusory or unknowable, they worked out their dialectical method as an instrument for the study of ideas.

Their discussions were conducted in accordance with a recognised procedure. X puts forward a postulate or proposition (thesis), which Y denies (antithesis). Y seeks to show that the postulate contradicts some truth which is accepted by both parties. X meets this objection by re-stating his postulate in a new form (synthesis). The thesis is negated by the antithesis and the antithesis by the synthesis. Thus, the discussion has proceeded by three stages, the third reaffirming the first at a higher level. The agreed form of the postulate then becomes an initial postulate to be discussed in the same way, leading to a new synthesis at a still higher level; and so, through the progressive resolution of the contradictions revealed in the course of discussion, we advance from lower truths to higher truths until eventually we reach absolute truth.

Taken over from ancient philosophy, this procedure became the basis of the Hegelian triad (thesis—anti-thesis—synthesis); and, since he too was an idealist, he regarded it as a movement of ideas—an exercise of 'pure reason'. The intricacies of Hegelian dialectics are thus described by Marx :

Wherein does the movement of pure reason consist? In posing itself, opposing itself, composing itself, in formulating itself as thesis, antithesis, synthesis; or, yet again, in affirming itself, negating itself, and negating the negation. . . .

Once it has managed to pose itself as a thesis, this thesis, this thought, opposed to itself, splits up into two contradictory thoughts—the positive and the negative, the yes and the no. The struggle between these two antagonistic elements comprised in the antithesis constitutes the dialectical movement. The yes becoming no, the no becoming yes, the yes becoming both yes and no, the no becoming both no and yes, the contraries balance, neutralise, paralyse each other. The fusion of these two contradictory thoughts constitutes a new thought, which is the synthesis of them. This thought splits up once again into two contradictory thoughts, which in turn fuse into a new synthesis. (PP 120.)

It was left to Marx to overcome the contradiction inherent in Hegel's philosophy by liberating his dialectic from its idealist integument :

My dialectical method is not only different from the Hegelian but is its direct opposite. In Hegel, the life-process of the human brain, that is, the process of thinking, which, under the name of 'the Idea', he even transforms into an independent subject, is the demiurge of the real world, and the real world is only the external phenomenal form of 'the Idea'. With me, on the contrary, the ideal is nothing else than the material world reflected by the human brain and translated into forms of thought. (C 1.19.)

Thus, set in its historical perspective, Marxism may be described as the negation of the negation (AD 155). In antiquity, primitive materialism was negated by Platonic idealism, which through Aristotle became the foundation of Christian theology, and dialectics was

negated by metaphysics. Then, with the rise of the modern bourgeoisie, materialism was reaffirmed in a metaphysical form and dialectics in an idealist form, until, with the rise of the proletariat, these were negated by Marxism.

The new philosophy of the proletariat differs from all previous philosophies in one vital respect—the reunion of theory with practice :

The philosophers have hitherto only *interpreted* the world. The point is, however, to change it. (ME 1.15.)

In Marxism all the positive achievements of human knowledge are brought together and forged into an instrument of proletarian class struggle (LCW 31.286). Hence, when we say that in Marxism theory is reunited with practice, we mean that theory and practice are consciously developed in a reciprocal movement, in which each guides, and is guided by, the other :

Discover the truth through practice, and again through practice verify and develop the truth. Start from perceptual knowledge and actively develop it into rational knowledge; then start from rational knowledge and actively guide revolutionary practice to change both the subjective and the objective world. Practice, knowledge, and again practice, and again knowledge. This form repeats itself in endless cycles, and with each cycle the content of practice and knowledge rises to a higher level. Such is the whole of the dialectical-materialist theory of knowledge, and such is the dialectical-materialist theory of the unity of knowing and doing. (MSW 1.308.)

*Form and Content**1. Scientific and Artistic Creation*

The scientist explores the outer world of objective reality, the artist the inner world of subjective reality. Both proceed by abstracting from the totality of concrete experience its essential elements, discarding the accidental. In this way the scientist constructs a logical system of ideas which 'reflects the objective reality more deeply, more truly, more fully' than perceptual knowledge (MSW 1.303). Similarly, the artist constructs a rhythmical representation of reality which 'is more concentrated, more typical, nearer the ideal, and therefore more universal than actual everyday life' (MSW 3.82). Both withdraw from reality in order to return to it at a higher level.

This does not mean that the two are independent of one another. The two worlds in which they do their special work are inseparable aspects of the social world in which they live and work together. Moreover, even in their special work the scientist cannot escape from the subject nor the artist from the object.

In his exploration of objective reality, the scientist concentrates his attention on the quantitative aspect of things, advancing from one level of abstraction to another, until he enters the realm of pure mathematics. This, however, is not the realm of nature, the object, but on the contrary the realm of pure thought, the subject, and his work in this sphere acquires a certain artistic quality. Conversely, in his exploration of subjective reality, the artist seizes on the qualitative aspect

of things, passing from speech to poetry and from poetry to music, until he enters a realm of pure sound, organised quantitatively in accordance with natural laws.

Again, in order to acquire knowledge of the external world, the scientist has to internalise the data of sense perception, that is, to accommodate them within the conceptual categories already established in his consciousness, and this process involves a subjective factor. Conversely, in order to influence his fellow-men, the artist has to externalise his feelings, that is, to present them in a form acceptable to others, and to do this he must be master of the objective conditions of his craft.

In both science and art, therefore, there is a perpetual contradiction between content and form, which develops in response to the contradictions developing within society itself. In times of revolutionary change the conflict becomes so acute that the traditional categories are more or less radically transformed.

In this chapter we shall survey two major art-forms, ancient and modern, with a view to showing how in form and content they express the social movement of their time. The first is Aeschylean tragedy, which may be regarded, together with Homeric epic, as the finest creation of classical Greek poetry; the second is symphonic music, which may be regarded, together with the novel, as the finest of the new art-forms created by the modern bourgeoisie.

2. The Ritual Framework

Art grows out of ritual. The ritual form becomes an art-form when it is taken over and developed by a conscious artist. The old form provides him with a traditional framework, which appeals to the people because it is familiar to them. Into this framework he introduces something new, and thereby modifies it. In this way he creates a new unity of form and content. This is the dialectic of artistic development. If he loses his grasp of the contradiction between form and content,

he lapses into formalism or naturalism—into formalism, if he cultivates the form for its own sake at the expense of the content; into naturalism, if he gives a merely passive reproduction of reality. These two tendencies are the artistic counterpart of metaphysics. Art is nothing if not dialectical. The 'laws of beauty' (EPM 76) are the laws of dialectics in their subjective or affective aspect.

In Greek tragedy, owing to the rapid development of Athenian democracy, the ritual framework, derived from the worship of Dionysus, was to a large extent preserved, and the performances in the theatre never lost their religious character; yet through them the dramatists conveyed the ideas of the most advanced class of the time—democratic, rational, individualistic. The result was a dynamic tension between form and content, corresponding to the transitory equilibrium achieved by the democratic revolution.

In modern bourgeois music, too, we observe the persistence of certain ritual forms, such as the mass and the cantata, but, as the revolutionary movement gathered strength, it became more secular and anti-clerical. Accordingly, the musical forms are freer from conventional restraints, more open to innovation.

The principal sources of bourgeois classical music were three, corresponding to the feudal structure of medieval society. First, there was the liturgy of the Church, which was subject to rigorous control. This was the dominant element. Secondly, the feudal nobles amused themselves with various forms of court entertainment. Among these was the opera, an offshoot of medieval drama. The operatic performances were often thrown open to the merchants and artisans. And thirdly, the peasantry had inherited from primitive society a wealth of songs and dances, which provided the composers with abundant thematic material both popular and national.

3. *Aeschylus*

The tragic performances were the principal event at an

annual festival at which a prize was awarded for the best drama of the year. Each competitor was required to submit four plays, a 'tetralogy' as it was called, consisting of three tragedies (a 'trilogy') followed by a satyr-play. The satyr-play was a burlesque, so called because it had a chorus of satyrs. These were mythical creatures, half man and half beast, representing the unsophisticated savage as seen by the Athenians. (They may be compared with the 'bird-man' Papageno in Mozart's *Magic Flute*.)

Let us take as an example the great tetralogy of Aeschylus, the *Oresteia*. The story, taken from mythology, contains many primitive features, such as the ancestral curse and the blood feud, but at the end of the trilogy these are all relegated to the past. The story is as follows. In the first play, Agamemnon is murdered on his return from Troy by his wife Clytemnestra. In the second, she is murdered by their son Orestes at the command of Apollo. In the third, after being purified by Apollo and persecuted by his mother's avenging spirits, the Furies, Orestes is brought to trial and acquitted before a court of justice founded for this purpose by Athena, goddess of democratic Athens. She resolves the conflict between Apollo and the Furies by inviting them to co-operate in supervising the new court. The reign of law has begun. At the end of the trilogy, the story is revealed to us in retrospect as a symbol of man's struggle to raise himself out of savagery into civilisation. The satyr-play dealt with the wanderings of Menelaus after the fall of Troy as a romantic, light-hearted parallel to his brother's tragic homecoming.

Aeschylus was a democrat and a Pythagorean. He believed that the conflict between tribal custom, represented in this drama by the Furies, and aristocratic privilege, represented by Apollo, had been resolved in democracy, which accordingly he regarded as the fusion of opposites in the mean. In the trilogy, therefore, which represented the offence, the counter-offence and the reconciliation, he created a dramatic form which

provided a perfect vehicle for the dialectical movement of his thought.

After Aeschylus there was a change. In the hands of Sophocles and Euripides the tetralogy fell apart. The rule remained that each competitor must submit three tragedies followed by a satyr-play, but they were no longer devoted to a single theme. This is not to say that Sophocles was inferior to Aeschylus as a dramatist. On the contrary, it was only in his hands that the art of tragedy in the strict sense matured. Tragedy, as defined by Aristotle, involves a reversal of fortune which is effected by 'the transformation of the action into its opposite': that is to say, the hero brings about his own destruction by entering on a course of action which results in the opposite of his intention. This feature, reflecting the contradictions inherent in a commodity-producing society, was perfected by Sophocles.

Sophocles stands to Aeschylus in the same relation as Heraclitus to Pythagoras. The centre of interest has shifted from the reconciliation to the conflict.

4. *The Symphony and the Novel*

The symphony orchestra is a creation of the modern bourgeoisie. Orchestral music, unaccompanied by song or dance, may be described as 'abstract' in the sense that it has no direct reference to objective reality and is therefore devoid of concrete meaning. In this respect it may be contrasted with the novel, also a creation of the modern bourgeoisie, which is 'concrete' in the sense that it is a direct representation of concrete living. The symphony and the novel stand at opposite poles in the process of differentiation through which these arts evolved out of the mimetic dance. A brief reconstruction of this process will throw light on the special features of 'abstract' music.

The primitive unity of the mimetic dance was preserved in the Greek choral ode, which was embodied in the drama and also existed independently. It consisted

of a group of performers singing and dancing to an instrumental accompaniment. The initial step in the process of differentiation was the elimination, on the one hand, of the dance, and, on the other, of speech. Two lines of development emerged.

First, with the elimination of the dance, the chorus is replaced by a soloist providing his own instrumental accompaniment. This gives us, on the one hand, the monody (for example, Sappho's hymn to Aphrodite) and, on the other, epic and ballad poetry. Then, with the elimination of the music, there emerge from the monody the various forms of lyric—the Greek epigram, the sonnet, the Chinese *tzu* and *lu shih*; and from epic the prose chronicle, leading to the prose romance and allegory, and those in turn to the novel.

In the second line of development, speech is eliminated. A group of performers dance in silence to an instrumental accompaniment. Then the dancers withdraw, leaving us with 'abstract' instrumental music.

Yet, even in its purely instrumental forms, music does not completely lose touch with its roots in the labour-process. It is, as it were, a second language. This point will become clear if we consider how it stands in relation to poetry and common speech.

In common speech the affective and cognitive elements are more or less evenly balanced. In poetical speech the affective elements—the rhythm, melody and fantasy—predominate. In poetry accompanied by music the predominance is greater. In classical music these elements have been developed to the point of replacing speech entirely. And yet this medium is highly articulated, being equipped with its own grammar and vocabulary. Not only is it constructed on formal principles which are in the last analysis identical with those of speech, but its thematic material—the actual tunes—is drawn directly or indirectly from traditional songs and dances. These musical themes are to the composer what verbal images are to the poet. They enable him to convey through a medium dominated exclusively by

rhythm and melody the entire range of his thought.

Let us imagine ourselves to be listening to an animated conversation conducted by several persons in a language unknown to us. Since we do not understand the meaning of the words, we are able to give our undivided attention to the natural rhythm and melody of the language, the modulation of the voices, the changes of tone as successive speakers intervene to reproach, plead, challenge or console, until at last, when all has been said, the conversation closes. Or, better still, since an orchestral work is the creation of a single mind, let us recall that passage (p. 86) in which Marx describes 'the movement of pure reason' as conceived by Hegel—'the yes becoming no, the no becoming yes, the yes becoming both yes and no, the no becoming both no and yes'. Is not this like the movement of a string quartet? Enlarge its scope, multiply and diversify the instruments, and you have a symphony. If Hegel gives us the dialectics of 'pure thought', Beethoven gives us the dialectics of 'pure feeling'.

And yet, since they constitute a unity of opposites, thought and feeling are inseparable. Here we may return to the contrast between the symphony and the novel.

Both, as we have already remarked, are creations of the modern bourgeoisie, rendered possible by the manufacture of improved instruments and by printed book production. The symphony is a public performance given by a highly-organised body of perhaps seventy or eighty players. The novel is private and informal, involving only two persons, author and reader, whose only contact is through the printed word. (The poet, too, of course, has ceased to depend on oral transmission, but he still retains the special features of poetical speech, leaving the reader to reconstruct them for himself.) The novelist uses his medium with such skill as to reveal in his characters the most intimate emotions, which even they may be unable to express in words. Just as he conveys feelings indirectly through 'cold print', so the

composer conveys ideas indirectly through 'pure sound'.

The symphony and the novel belong to the same period but to different stages in the bourgeois revolution. The symphony matured in Vienna 'within the womb' of feudal society, inspired by the bourgeois-democratic ideals of the French Revolution. The novel expressed the bourgeois concept of the individual which was then taking shape with the development of free competition in capitalist Britain.

5. *Symphonic Form*

The transition from medieval to modern music is marked by a progressive diminution of the vocal part. In medieval music the voice predominates. In the *da capo* aria, which was evolved as the basic unit in the cantata and the opera, the vocal and instrumental elements are in equilibrium. The symphony is derived from the operatic overture, an instrumental prelude introducing the prevailing mood and tonality of the music drama to come. Other forms, such as the concerto and the sonata, are smaller in scope, more intimate and lyrical. In the piano concerto, derived from the aria, the piano has replaced the voice; in the piano sonata it has taken over the orchestral part as well. In the concerto the piano may be said to be conversing with friends; in the sonata it communes with itself.

All the forms of classical instrumental music—the symphony, the concerto, the sonata, the quartet, etc.—are founded on what is called sonata form, and that in turn on the systematic use of tonal variations, or changes of key, which is a distinctive feature of classical music. Sonata form was evolved during the first half of the eighteenth century. Earlier composers had worked with binary form, symmetrical and static. This was not because they were unacquainted with ternary form, which was common in folk music, but it did not appeal to them, because it had no place in the conventions which they had inherited from the medieval Church.

Their own compositions, however, were by no means lacking in movement. In many of them, especially the work of J. S. Bach (1685-1750), we receive an impression of perpetual motion, passing through long sequences of intricate convolutions, but always circular, as though confined within fixed limits.

The emergence of ternary form, with tonality as the principal factor in determining the structure, was effected as follows. First we have a single theme stated and re-stated. There may be changes of key, but they are only incidental. This is binary form: A-B. Next, there develops within the first section (A) a change of key ($a-b$) which is followed in the second section (B) by a change in the reverse direction ($b-a$): Aa-Ab-Bb-Ba. Here, ternary form is developing 'within the womb', as it were, of binary form: $a-bb-a$. Finally, in the work of Haydn, the new form, based on tonality, breaks free from the old and comes to its full growth in the sonata and the symphony.

A typical sonata contains three or four movements, which are shaped by changes of key both in their internal structure and in their relations to one another as parts of an organic whole. The first movement is the most elaborate. It has three sections, known as the Exposition (A), the Development (B), and the Recapitulation (A). The first section, which is usually repeated, presents two contrasted themes, which are developed in the second section and then re-stated in the third in a new form determined by the Development. It is this dialectical relation between the parts that gives the whole movement its dynamic quality:

The whole essence of sonata form as a drama is that the composer presents us with certain material in the Exposition; in the Development we get to know a great deal about it that we never dreamed of; in the Recapitulation we reassess the material *in the light of the experience gained*. (A. Hopkins, *Talking about Symphonies*, 1961, p. 17.)

In other words, the three sections stand to one another in the relation of thesis, antithesis, synthesis : A-B-A'.

The symphony is constructed on the same formal principles as the sonata, but on a larger scale, since it is composed for orchestra, not for one or two instruments only. There are usually four movements, the slow second movement being followed by a Minuet or Scherzo, a light-hearted interlude, and that in turn by the Finale, in which the conflict is triumphantly resolved.

Thus, the dialectical movement of the sonata and the symphony is parallel to the dialectical movement which appears in the philosophy of the period, both being expressions of the bourgeois-democratic movement which spread across Europe in the eighteenth century and culminated in the French Revolution.

6. *Beethoven*

The creators of symphonic form were Haydn (1732-1809), Mozart (1756-91) and Beethoven (1770-1827). All three belonged to Vienna, capital of the Hapsburg Empire, which was then the stronghold of feudalism in Europe. Haydn was a bond-servant attached to Prince Esterhazy, and his terms of service were so onerous that his genius might have been stifled if the Prince had been a less enlightened patron. Mozart was not so fortunate. He broke away from his patron, the Archbishop of Salzburg, with the result that he was seldom free from financial difficulties and died a pauper. Beethoven was never in feudal service. He was a bourgeois, and proud of it: 'There are hundreds of princes', he is reported to have said, 'but only one Beethoven'. At the same time he was deeply conscious of the contradictions which his bourgeois status entailed.

The bourgeois-democratic ideals of this period were propagated by the Freemasons. This was a secret society with an elaborate ritual of initiation based on the ancient Greek and Egyptian mysteries. Its membership was drawn from merchants, intellectuals and the lower

ranks of the nobility. Among those known to have joined the Order were, in France, Voltaire, Diderot, Condorcet and Mirabeau; in Germany, Goethe, Lessing and Herder; in Austria, Gluck, Haydn and Mozart. Beethoven is not known to have been a member, but he was closely associated with Freemasons and deeply influenced by their ideas.

These ideas were expressed symbolically in a series of 'triads', as they were called: for example, Liberty—Equality—Fraternity, Nature—Reason—Wisdom. The third term was understood to represent the combination or reconciliation of the first and second. Thus, Liberty and Equality are combined in Fraternity; Nature and Reason are reconciled in Wisdom. In *The Magic Flute*, it will be remembered, the Temple of Sarastro has three doors—Nature and Reason on the outside, and Wisdom in the middle. The founders of the Order had studied Greek philosophy and acknowledged the Pythagorean origin of this doctrine of the mean. They took it over because it corresponded so closely to their own position.

At the turn of the century, when Napoleon led his armies into Central Europe, he was greeted everywhere both as defender of the Revolution and as leader in a war of national liberation. Evidence of the enthusiasm which his victories aroused in democratic circles will be found in Tolstoy's *War and Peace*, where Count Bezukhov (later to become a Freemason) shocks the Court flunkeys with his progressive views. In the same vein, when Napoleon entered Jena, Hegel is said to have acclaimed him as 'the Absolute Spirit mounted on a white charger'. Referring to the same period, Wordsworth wrote:

*Bliss was it in that dawn to be alive,
But to be young was very heaven.*
(*The Prelude*, Book 11)

It was in this spirit that Beethoven inscribed to Napoleon his Third Symphony, the *Eroica*, which he

had composed in response to a suggestion from Count Bernadotte, the French Ambassador in Vienna. Later, on receiving the news that Napoleon had been crowned Emperor, he cancelled the inscription.

Beethoven was only one of many republicans who turned against Napoleon in the ensuing years; but, whereas most of them, including Hegel, renounced their revolutionary ideals, Beethoven stood his ground, lonely but indomitable. After the Congress of Vienna (1814-15), at which the reactionary forces succeeded in stemming the revolutionary tide, the Viennese public gave itself up to Italian light opera, and Beethoven fell silent. Then, nine years later, he produced the last and greatest of his symphonies, in which he shows that he was ahead of nearly all his contemporaries in his insight into the bourgeois revolution. The Choral Symphony is revolutionary in both form and content. The introduction of a chorus was itself a revolutionary innovation. The choice of Schiller's *Ode to Joy*, which is based on Masonic ideas (for the Freemasons joy and liberty were inseparable) was a reaffirmation of faith in universal brotherhood. The main theme of the slow movement, recalling Florestan's aria in *Fidelio*, expresses the anguish of those who sacrifice everything for the truth ('Meine Pflicht habe ich getan'). This movement also anticipates the spirit of the late quartets, in which the hopes that had once been so close to fulfilment have receded into an infinite distance. Above all, the section of the Finale marked *Alla marcia*, which recalls a French revolutionary march and leads into a magnificent crescendo proclaiming that the masses are on the move, shows that in his last years Beethoven understood that the real makers of history are not individual leaders, who are always liable to fail, but the masses of the people.

The French Revolution was, of course, a bourgeois revolution, and its ideal of liberty, equality, fraternity proved in the event to be an illusion. Nevertheless, by sweeping away the Bourbons and striking terror into the Hapsburgs, it shook European feudalism to its

foundations and released the forces that were to precipitate the revolutions of 1848 and eventually the proletarian revolution of 1917. In the words of Lenin, writing in 1907, it was a revolution 'which to this day demonstrates by the fierce hatred it arouses the vitality and force of its influence on humanity'. (LCW 13:38, cf. 28.423.) This was the source from which Beethoven drew the vitality and force of his music.

Aeschylus and Beethoven both possessed a profound sense of dialectics, which enabled them to reveal in the form and content of their work the contradictions underlying the social movement of their time. Hence, if their work has a permanent value as a source of inspiration for subsequent generations, that is not because it embodies absolute truths, valid for all ages, but because in their own lifetime it was so intensely contemporary.

If this criterion is accepted, it must be granted that Beethoven was the greater artist. The dialectic of Aeschylus, as of Pythagoras, was closed to the future. That is made clear at the end of the *Oresteia*, where, having established democracy, Athena warns her people to leave their laws unchanged. Hegel set a similar limit to his own dialectic in his last years, when he accepted the Prussian monarchy as the summit of historical development. There is no such limitation in Beethoven. His dialectic expresses in artistic form the infinite potentialities of 'practical human sensuous activity'. In this respect, he too, no less than Hegel, was a forerunner of Marx.

*Intellectuals and the Proletariat*1. *Revolutionary Intellectuals*

In general, the intellectual life of society is dominated by the ideology of the ruling class :

The ideas of the ruling class are in every epoch the ruling ideas; that is, the class which is the ruling *material* force of society is at the same time its ruling *intellectual* force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it. The ruling ideas are nothing more than the ideal expression of the dominant material relationships. (GI 60.)

In revolutionary periods, however, as the fabric of the old society begins to disintegrate, a small section of the ruling class tends to break away and join forces with the revolutionary class :

In times when the class struggle nears the decisive hour, the process of dissolution going on within the ruling class—in fact, within the whole range of the old society—assumes such a violent, glaring character that a small section of the ruling class cuts itself adrift and joins the revolutionary class, the class that holds the future in its hands. Therefore, just as at an earlier period a section of the nobility went over to the bourgeoisie, so now a portion of the bourgeoisie goes over to the proletariat, and in particular a portion

of the bourgeois ideologists, who have raised themselves to the level of understanding theoretically the historical movement as a whole. (ME 1.117, cf. LCW 5.375.)

These intellectuals transfer their allegiance to the proletariat because they have learnt from experience that, notwithstanding its historical achievements, capitalist society is irrational and immoral.

2. *Science in the Service of Capital*

In capitalist society science becomes 'a productive force distinct from labour and pressed into the service of capital' (C 1.361). In the era of monopoly capitalism scientific research is more highly organised than ever before, but always with the overriding aim of private profit and devoted increasingly to war. The training of natural scientists is so departmentalised as to make it difficult to acquire a theoretical grasp of natural science as a whole, and they receive no training at all in the study of human society. Conversely, social and historical studies are cut off from the natural sciences and from each other. Economics is separated from history and both from politics. History is taught as though it were not a branch of science at all. In the natural sciences, the student may know nothing of Marxism, yet at least he recognises dialectical processes in nature, even though he does not know them by that name; but the laws of dialectics mean nothing to the bourgeois historian, who does not even recognise the class struggle.

This contradiction in the bourgeois educational system between the study of nature and the study of man reflects the conflict in the bourgeois consciousness between the need to develop science as a productive force and the need to conceal the true relationship between capital and labour.

Some bourgeois scientists seek to defend their situation by maintaining that their concern is with the advance-

ment of knowledge for its own sake and not with the social consequences of their work; but, as the social issues become more pressing, it becomes difficult for them to persist in this attitude without loss of self-respect. Meanwhile, others of them are brought through their industrial ties into contact with the workers and so drawn into the class struggle. In this way they learn that only through the socialist revolution can science be reunited with labour as a force devoted to the production of use-values in the service of the people.

3. *Art as a Commodity*

'Capitalist production is hostile to certain branches of intellectual labour, for instance, poetry and art' (TSV 1.285). As science becomes a productive force, so art becomes a commodity. This commodity is an article of consumption, which differs from other commodities in that its value is determined by adventitious factors, such as changes of fashion and financial speculation on the part of wealthy art collectors and entrepreneurs.

In feudal society, the artist had occupied, in common with other craftsmen, a humble but secure place in the life of the community. He was in bondage to his lord, but their relationship was personal, not commercial. With the growth of commodity production, these 'idyllic' relations were replaced by the 'cash nexus'. The transition may be observed in the lives of the great Viennese composers, as we remarked in the last chapter. In Beethoven's time, the centre of musical activity was passing from the salon to the concert-hall and from the patron to the impresario. He welcomed the change, but was painfully aware that he had become a producer for the market:

There ought to be one great depository of art in the world, to which the artist might repair with his works and on presenting them receive what he needed. But, as it is now, one must be half a tradesman as

well—how is this to be endured? (*Letters*, ed. Anderson, 1.47.)

The freedom of the artist in capitalist society is the freedom of the market (LCW 10.48).

In the era of monopoly capitalism even this freedom is curtailed. The monopoly capitalists have no use for the arts except as a pastime for a small *élite*. For the rest, they exploit the mass media as a source of profit and as a means of spreading moral and spiritual corruption. The effects of this evil are to be seen everywhere, but most of all in those countries, still dominated by imperialism, in which the traditional forms of popular culture are being systematically destroyed.

In this situation the artist has to make his choice. He may accept his status as a commodity-producer and go out for commercial success; but by so doing he surrenders his integrity as an artist. Or, rejecting commercial values, he may seek refuge in the doctrine that artistic creation is an autonomous act of self-expression—art for art's sake; but, far from offering an escape from those values, this doctrine is itself an expression of the self-centred individualism inherent in commodity production. By renouncing his social responsibility he cuts himself off from his source of inspiration. If he is to recover his power to inspire, he must seek inspiration from the people. Only by identifying himself with them can he ensure that his art will be valued for the happiness it gives and not for its market price.

4. *Ideological Remoulding*

The ideas associated with commodity production and class exploitation are so deeply rooted in our minds that it is only through sustained political struggle that we can recognise them fully for what they are. Hence the need, during and after the socialist revolution, for the ideological remoulding of all classes—not merely the old exploiting class, but the classes that support the

revolution, including the intellectuals and the proletariat itself :

The working class remoulds the whole of society in class struggle and in the struggle against nature, and at the same time it remoulds itself. (MFE 105.)

In giving leadership to the intellectuals, the proletariat, led by the Party, must convince them that only by remoulding themselves can they make their full contribution to the new society :

Our literary and art workers must accomplish this task and shift their stand; they must gradually move their feet over to the side of the workers, peasants and soldiers, to the side of the proletariat, through the process of going into their very midst and into the thick of practical struggles and through the process of studying Marxism and society. (MSW 3.78.)

The mass of intellectuals have made some progress, but they should not be complacent. They must continue to remould themselves, gradually shed their bourgeois world outlook and acquire the proletarian, communist world outlook, so that they can fully fit in with the needs of the new society and unite with the workers and peasants. This change in world outlook is something fundamental, and up till now most of our intellectuals cannot be said to have accomplished it. We hope that they will continue to make progress and that, in the course of work and study, they will gradually acquire the communist world outlook, get a better grasp of Marxism-Leninism, and become integrated with the workers and peasants. (MFE 108.)

This process is conducted under the leadership of the proletariat, but, if it is to be successful, it must be carried through with the free consent and full conviction of the intellectuals themselves :

In advocating freedom with leadership and

democracy under centralised guidance, we in no way mean that coercive measures should be taken to settle ideological questions or questions involving the distinction between right and wrong among the people. All attempts to use administrative orders or coercive measures to settle ideological questions or questions of right and wrong are not only ineffective but harmful. We cannot abolish religion by administrative decree or force people not to believe in it. We cannot compel people to give up idealism any more than we can force them to believe in Marxism. The only way to settle questions of an ideological nature or controversial issues among the people is by the democratic method, the method of discussion, of criticism, of persuasion and education, and not by the method of coercion and repression. (MFE 86.)

The experience of the Chinese Communist Party over the past quarter of a century has shown that, handled in this way, the contradiction between the proletariat and the intellectuals, which is non-antagonistic, can be successfully resolved.

5. *Bourgeois Morality and Culture*

In bourgeois ideology questions of right and wrong are treated by reference to God's will or some other criterion standing outside of human society. In proletarian ideology they are judged in the light of the overriding need to carry through the proletarian revolution and so put an end to the exploitation of man by man :

We reject all morality based on extra-human and extra-class concepts. We say that this deceives, dupes and stultifies the workers and peasants in the interests of the landowners and capitalists. We say that our morality is entirely subordinate to the interests of the class struggle of the proletariat. (LCW 31.291.)

The old society was based on the principle, rob or

be robbed, work for others or make others work for you, be a slave-owner or a slave. . . . If I work this plot of land, I don't care a rap for anybody else; if others starve, all the better, I shall get more for my grain. If I have a job as a doctor, engineer, teacher or clerk, I don't care a rap for anybody else. If I flatter and fawn on the powers that be, I may be able to keep my job and even get on in life and become a bourgeois. A communist cannot harbour such a psychology and such sentiments. . . .

When people talk to us about morality, we say that to a communist all morality lies in united discipline and conscious mass struggle against the exploiters. We do not believe in an eternal morality and we expose the falsity of all the fables about morality. Morality serves the purpose of helping human society to rise to a higher level and to free itself from the exploitation of labour. (LCW 31.293.)

We reject bourgeois morality; but it does not follow that we reject bourgeois culture. Here, bearing in mind the dual character of the bourgeoisie, we must draw a distinction.

Scientific truth is objective knowledge of the external world, tested in practice. Thanks to modern science, man can today envisage the possibility of putting an end to exploitation; and modern science is a creation of the bourgeoisie. Marxism itself rests 'on the solid foundation of the human knowledge accumulated under capitalism' (LCW 31.286). The proletariat does not reject this knowledge, but takes it over, adds to it, and ensures that it is used for the benefit of humanity.

Artistic truth is an expression of the inner world of the emotions as portrayed by the artist. It is by its nature subjective, involving ideas of beauty, good and evil, right and wrong, which differ from class to class and from age to age. It was through bourgeois art, which for a long time went hand in hand with bourgeois science, that man expressed, and by expressing

strengthened, his new confidence in the future. At the same time, the great bourgeois realists were acutely conscious of the breach at the heart of their society :

*Through tatter'd clothes small vices do appear;
Robes and furr'd gowns hide all. Plate sin with gold,
And the strong lance of Justice hurtless breaks;
Arm it in rags, a pigmy's straw doth pierce it.*

(Shakespeare, *King Lear*, 4.6.)

This is the positive, or revolutionary, side of their work. There is also, of course, a negative or reactionary side, due to the ideological limitations of their class and epoch. In contemporary bourgeois society the negative aspect has prevailed. The artist's work may be technically accomplished, but in content it is decadent or trivial. It has lost touch with the masses of the people, and so withered at the root.

It follows that, in determining its attitude to the bourgeois classics, the proletariat must be guided by its own class interests. There is no purely artistic criterion, independent of politics; but at the same time a work of art cannot be judged adequately from a purely political point of view. The two criteria, the artistic and the political, must be combined :

There is the political criterion and there is the artistic criterion; what is the relationship between them? Politics cannot be equated with art, nor can a general world outlook be equated with a method of artistic creation and criticism. We deny not only that there is an abstract and absolutely unchangeable political criterion, but also that there is an abstract and absolutely unchangeable artistic criterion; each class in every class society has its own political and artistic criteria. But all classes in all class societies invariably put the political criterion first and the artistic criterion second. The bourgeoisie always shuts out proletarian literature and art, however great their artistic merit. The proletariat must similarly distinguish

among the literary and art works of past ages and determine its attitude towards them only after examining their attitude to the people and whether or not they had any progressive significance historically. Some works which politically are downright reactionary may have a certain artistic quality. The more reactionary their content and the higher their artistic quality, the more poisonous they are to the people and the more necessary it is to reject them. A common characteristic of the literature and art of all exploiting classes in their period of decline is the contradiction between their reactionary political content and their artistic form. What we demand is the unity of politics and art, the unity of content and form, the unity of revolutionary political content and the highest possible perfection of artistic form. (MSW 3.89.)

Having reinterpreted the bourgeois classics from its own point of view, the proletariat will assimilate all the creative elements contained in them and merge them with its own artistic traditions, including the rich heritage of folk-song. From the fusion of these elements there will emerge, in the course of political struggle, the new art of the future, socialist in content, national in form.

In all this the revolutionary intellectuals have an indispensable part to play, provided that they merge themselves with the people :

We must take over all the fine things in our literary and artistic heritage, critically assimilate whatever is beneficial, and use them as examples when we create works out of the literary and artistic raw materials in the life of the people of our own time and place. . . . But taking over legacies and using them as examples must never replace our own creative work; nothing can do that. . . . China's revolutionary writers and artists, writers and artists of promise, must go among the masses; they must for a long period of time unreservedly and wholeheartedly go among the masses

of workers, peasants and soldiers, go into the heat of the struggle, go to the only source, the broadest and richest source, in order to observe, experience, study and analyse all the different kinds of people, all the classes, all the masses, all the vivid patterns of life and struggle, all the raw materials of literature and art. Only then can they proceed to creative work. (MSW 3.81.)

It is essentially the same message that was given to English intellectuals by Christopher Caudwell, who himself went into the heat of the struggle and gave his life for the revolution. Addressing them in the name of the proletariat, he wrote :

You must take the difficult, creative road—that of refashioning the categories and technique of art, so that it expresses the new world coming into being and is part of its realisation. Then we shall say your art is proletarian and living; then we shall say your soul has left the past—it has dragged the past into the present and forced the realisation of the future. (*Illusion and Reality* (1937), 2 ed. 1947, p. 289.)

6. *Illusion and Reality*

In class society, and especially in contemporary capitalist society, truth and beauty appear as antagonistic opposites. The real is ugly and the beautiful is unreal. The artist seeks to resolve this contradiction 'in and through the imagination'. In this he resembles the magician and the myth-maker, but, whereas they confused illusion with reality, he is conscious of his illusion as an illusion. When he transfers his allegiance to the proletariat and identifies himself with the masses of the people, he undergoes a still deeper change. Not only does he recognise his illusion as an illusion, but he is now conscious of its social basis. As a Marxist-Leninist, he understands that man's consciousness is determined by his social being; and he also understands

that, while in general the material determines the mental, the mental reacts on the material (MSW 1.336). For him, therefore, the artist's task is, not to seek refuge from reality in a world of fantasy, but to reveal to his fellow-workers in all its richness the reality of the new world which they are labouring to create, and so, by inspiring them to yet greater efforts, to hasten its realisation :

Revolutionary literature and art should create a variety of characters out of real life and help the masses to propel history forward. For example, there is suffering from hunger, cold and oppression on the one hand, and exploitation and oppression of man by man on the other. These facts exist everywhere and people look on them as commonplace. Writers and artists concentrate such phenomena, typify the contradictions and struggles within them, and produce works which awaken the masses, fire them with enthusiasm, and impel them to unite and struggle to transform their environment. (MSW 3.82.)

In this way, as the proletarian revolution is carried forward to its conclusion, as the intellectuals of the old society identify themselves with the masses, and as the masses raise their cultural level by assimilating the intellectual achievements of the old society, scientific and artistic, so the division of society into classes, the division between mental and manual labour, and the division within the human consciousness, will merge into a new unity, the unity of the cognitive with the affective aspects of man's thinking and of both with practice. In the words of an English revolutionary poet :

*The loathsome mask has fallen, the man remains
Sceptreless, free, uncircumscribed, but man
Equal, unclassed, tribeless and nationless,
Exempt from awe, worship, degree, the king
Over himself.*

(Shelley, *Prometheus Unbound*, 3.4.)

References

Marx and Engels

- ME. Marx and Engels, Selected works in three volumes. Moscow, 1969.
- ME 1.13-15. Theses on Feuerbach. 1845.
- ME 1.108-17. Manifesto of the Communist Party. 1848.
- ME 1.148-74. Wage-labour and capital. 1849.
- ME 1.502-06. Marx, Preface to A contribution to the critique of political economy. 1859.
- ME 3.41-57. Engels, Introduction to the Dialectics of nature. 1875-76.
- ME 3.66-74. Engels, The part played by labour in the transition from ape to man. 1876.
- ME 3.95-151. Engels, Socialism utopian and scientific. 1880.
- ME 3.191-334. Engels, Origin of the family, private property and the state. 1884.
- ME 3.275-84: 3.5. The rise of the Athenian state.
- ME 3.335-76. Engels, Ludwig Feuerbach and the end of classical German philosophy. 1886.
- OR. Marx and Engels, On religion. Moscow, 1957.
- OR 41-58. Marx, A contribution to the critique of Hegel's philosophy of right. 1844.
- EPM. Marx, Economic and philosophical manuscripts of 1844. Moscow, 1959.
- GI. Marx and Engels, The German ideology. (London, 1965) 1835-46.
- GI 27-95: Feuerbach.
- PP. Marx, The poverty of philosophy. (Moscow n.d.) 1847.
- PP 116-21: 2.1. First observation.
- HF. Marx and Engels, The holy family. (Moscow, 1956) 1848.
- HF 78-82: 5. The mystery of speculative construction.

- HF 167-78: 6.3. Critical battle against French materialism.
- GR. Marx, Grundrisse. (Harmondsworth, 1973) 1857-58.
- GR 81-111: Introduction (Notebook M).
- GR 471-513: Forms which precede capitalist production.
- CPE. Marx, A contribution to the critique of political economy. (London, 1971) 1859.
- TSV. Marx, Theories of surplus-value. 3 vols. (London, 1969) 1860-65.
- C. Marx, Capital: a critical analysis of capitalist production. 3 vols. (Moscow, 1959) 1867-94.
- C 1.12-20: Afterword to the second German edition.
- C 1.35-40: 1.1. The two factors of a commodity.
- C 1.71-83: 1.4. The fetishism of commodities.
- C 1.177-85: 7.1. The labour-process.
- C 1.322-35: 13. Co-operation.
- C 1.359-70: 14.5. The capitalistic character of manufacture.
- C 1.371-85: 15.1. The development of machinery.
- AD. Engels, Herr Dühring's revolution in science (Anti-Dühring). (London n.d.) 1878.
- AD 9-20: Prefaces.
- AD 23-33: Introduction, 1 General.
- AD 67-76: 1.6. Cosmogony, physics, chemistry.
- AD 88-96: 1.8. The organic world (conclusion).
- AD 122-33: 1.11. Freedom and necessity.
- AD 135-44: 1.12. Quantity and quality.
- AD 145-59: 1.13. Negation of the negation.

Lenin

- LCW. Lenin, Collected works. 45 vols. Moscow, 1960-70.
- LCW 2.19-27. Frederick Engels. 1895.
- LCW 5.347-566. What is to be done? 1902.
- LCW 5.375-77: 2.A. The beginning of the spontaneous upsurge.
- LCW 10.44-49. Party organisation and Party literature. 1909.
- LCW 13.15-49. Against boycott. 1907.
- LCW 14.17-399. Materialism and empirio-criticism. 1908.
- LCW 14.40-53: 1.1. Sensations and complexes of sensations.
- LCW 14.99-107: 2.1. The 'thing-in-itself'.
- LCW 14.107-16: 2.2. Transcendental.
- LCW 14.122-31: 2.4. Does objective truth exist?

- LCW 15.50-62. The assessment of the Russian revolution. 1908.
- LCW 28.412-28. Report to the Second All-Russian Trade Union Congress. 1919.
- LCW 31.283-99. The tasks of the youth leagues. 1920.
- LCW 38.65-238. Conspectus of Hegel's book, The science of logic. 1914-16.
- LCW 38. 341-54: Conspectus of Lassalle's book, The philosophy of Heraclitus. 1915.
- LCW 38.355-64. On the question of dialectics. 1915.

Stalin

- SML Concerning Marxism in linguistics. London, 1950.

Mao Tse-tung

- MSW. Selected works of Mao Tse-tung. Peking, 1961-65.
- MSW 1.147-52. Be concerned with the well-being of the masses. 1934.
- MSW 1.295-309. On practice. 1937.
- MSW 1.311-47. On contradiction. 1937.
- MSW 3.69-98. Talks at the Yen-an forum on literature and art. 1942.
- MSW 4.451-59. The bankruptcy of the idealist conception of history. 1949.
- MFE Four essays on philosophy. Peking, 1966.
- MFE 79-129. On the correct handling of contradictions among the people. 1957.
- MFE 134-36. Where do correct ideas come from? 1963.

Index

- Aeschylus, 89, 91, 100
Anaxagoras, 55, 56, 77
Anaximander, 52
Aphrodite, 71, 72
Aristotle, 57, 82, 86, 92
- Babylonia, 44, 49, 52
Bach, 96
Bacon, 77, 78, 82
Barleycorn, 67
Beethoven, 94, 97, 98, 99, 100,
103
Belinsky, 69
Berkeley, 83
Bernadotte, 99
Bezukhov, 98
- Caudwell, 110
Chang O, 72
Chu Yuan, 70
Condorcet, 98
Copernicus, 92
- Darwin, 84
Democritus, 56, 77, 82
Diderot, 83, 98
Duns Scotus, 58
Dürer, 76
- Egypt, 43, 46, 47, 49
Engels, 53, 76, 79
Epicurus, 56, 57, 82
Erlikh Khan, 63
- Esterhazy, 97
Euripides, 92
- Florestan, 99
- Galle, 79
Gluck, 98
Goethe, 69, 98
- Haydn, 85, 96, 97, 98
Hegel, 56, 83, 84, 85, 94, 96
99, 100
Hévétius, 83
Heraclitus, 53, 54, 55, 85, 92
Herder, 98
Homer, 72, 89
Hume, 83
- Ireland, 44, 68
- Kant, 83, 84
Keats, 72
Kepler, 82
- Leibniz, 83
Lenin, 16, 55, 100
Leonardo, 76
Lessing, 98
Leucippus, 56
Leverrier, 79
Linnaeus, 82
Luther, 77

- Machiavelli, 77
 Mao Tse-Tung, 59, 73, 74, 75
 Marx, 23, 24, 59, 77, 80, 85,
 94, 100
 Mexico, 41, 42
 Mirabeau, 98
 Montalembert, 77
 Mozart, 91, 97, 98

 Napoleon, 98, 99
 Newton, 92
 Niamh, 68

 Orphism, 50, 53

 Papageno, 91
 Parmenides, 55, 56, 85
 Pavlov, 14, 15, 16, 30
 Plato, 56, 57, 86
 Pythagoras, 50, 53, 54, 55,
 56, 92, 98

 Rousseau, 84

 Sappho, 70, 71, 72, 93
 Sarastro, 98
 Schiller, 99
 Shakespeare, 65, 108
 Shelley, 111
 Sophocles, 92

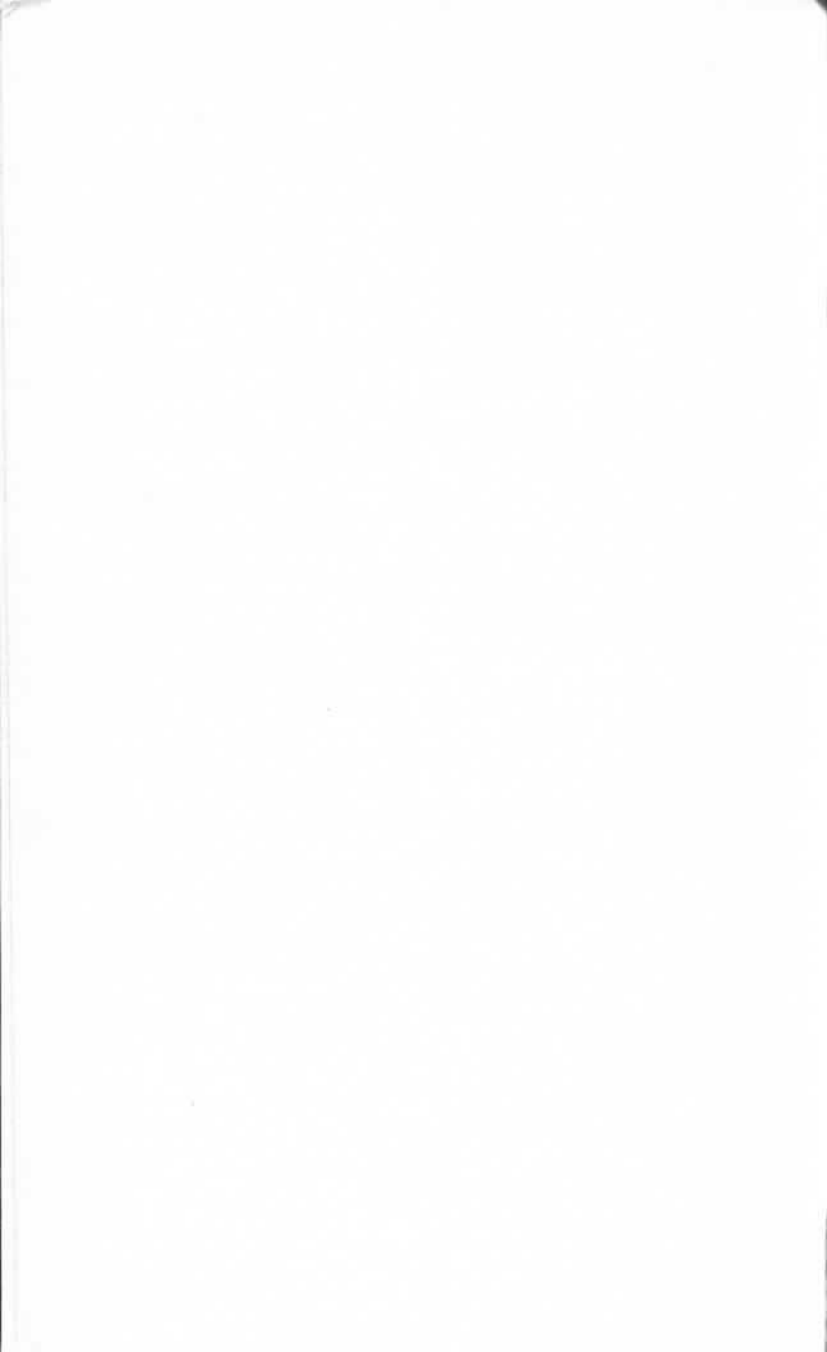
 Thales, 52
 Tolstoy, 98

 Usheen, 68
 Utka, 60, 62

 Voltaire, 98
 Vygotsky, 30

 Wordsworth, 98
 Wu Kang, 72







THE BOOK

The Human Essence is a new version of *Marxism and Poetry* (1945), which has been out of print for many years. The earlier work has been rewritten in the light of further evidence and expanded so as to include music as well as poetry and science as well as art.

THE PUBLISHERS

The CHINA POLICY STUDY GROUP was set up in 1963 to report on Chinese policies and social, economic and political developments. Its monthly publication, BROADSHEET, has readers in more than 40 countries. Particulars may be obtained from 62 Parliament Hill, London NW3 2TJ, England.

The cover shows a Chinese woman peasant working on a wall painting (New China News Agency).

United Kingdom  post free 75p

ISBN: 0 9502015 3 7