

# PSYCHE AND SOCIETY

December-2014

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PSYCHE AND SOCIETY

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### Editorial

#### Significance of Pavlov

According to Razran (1965), "Pavlov created the body and breathed into it the mind." We can imagine what a tremendous importance he has given to Pavlov's works. Because Pavlov is the only neurophysiologist and scientist of his time overturned the legacy of Descartes, a legacy that lives on our mind for the past several centuries. According to this view we each have a mind trapped in the physical structure of the body. Pavlov and his colleague's helped us to develop this view that, there is no separate entity like 'mind' to guide the body, it is a product of the workings of a living body. This is similar to Aristotle's view. So according to Pavlov psychological and biological factors are inseparable. Psychology is ingrained in the higher nervous system. So any biological malfunction influence our mind and any psychic disturbances influence our body.

We can say, Pavlov created the chapter 'The Higher Nervous System', in physiology, and actually that is the seat of mind. Fifty years of his rigorous laboratory research and leadership produced a model of brain function based on the fields of excitation and inhibition. These fields bear a striking resemblance to the neural unit models, for which several researchers working in sensory physiology have won Nobel Prizes.

The influence of Pavlov in America has been restricted to the bare fact of classical conditioning; interest has been restricted largely to parametric work specially of human behaviour aimed at isolating the necessary conditions for association and the nature of the association formed (Malone, 2008). Although this has led to some interesting and useful findings, the conditioned response meant a great deal more to Pavlov than that. It was the key to unlock the secrets of the brain: it was not in itself the secret!

According to Professor A.G. Ivanov-Smolensky (1948), "The higher nervous processes, which form the basis of psychological concepts-processes which until recently were entirely unamenable to study-now become the subject of objective investigation by a new science, the science founded by I. M. Sechenov and built up by I.P. Pavlov and his school."

Renowned neurophysiologist K. M. Bykov (1957) says, "All physiology can be divided into two stages-the pre-Pavlov stage and the Pavlov stage. ... The history of psychology may be divided in a similar manner. The pre-Pavlov psychology is based on the idealist outlook; Pavlov's psychology is essentially materialistic."

Pavlov's cardinal thesis is the Darwinian principle of the interaction of the organism and the environment. The concept of conditioned reflexes as dealing with *signals* of external objects is one of the richest theoretical contributions ever made to science.

For human being 'language' with its verabal signals standing for sense images, is subject to the laws of the formation and extinction of conditioned reflexes, the laws of analysis and synthesis, of irradiation and concentration, and in general, to the laws of excitation and

inhibition, which were discovered by Pavlov to be true of higher nervous activity as a whole. There would be special applications and special forms of these laws as they relate to the work of the second signalling system. There would in addition, be laws peculiar to this system. But in any case, they would be expressions of the essential laws of nervous processes as disclosed by the experimental work on animals.

Marx wrote in 1844, "Sense perception (see Feuerbach) must be the basis of all science. Only when science starts out from sense perception in the dual form of sensuous consciousness and sensuous need—i.e., only when science starts out from nature—is it real science. The whole of history is a preparation, a development, for 'man' to become the object of sensuous consciousness and for the needs of 'man as man' to become [sensuous] needs. History itself is a real part of natural history and of nature's becoming man. Natural science will, in time, subsume the science of man, just as the science of man will subsume natural science: there will be one science."

Pavlov discovered in his laboratory what is 'sensuous consciousness' and what is 'sensuous need'!

Our readers may consult with some informative publications dealing with Pavlov's theory listed below:

1. Pavlov, *Lectures on Conditioned Reflexes*, 1948
2. Pavlov, *Selected Works*, 1955
3. Platanov, K. *The Word as Physiological and Therapeutic Factor*, 1959
4. Bykov, K.M. *The Cerebral Cortex and the Internal Organs*, 1957
5. Asratyan, E.A. *Conditioned Reflex and Compensatory Mechanisms*, 1965
6. Todes, Daniel P. *A Life in Science: I. P. Pavlov*, 2014 **PAS**

## Pavlovian Concept of Inhibition

Basudev Mukherjee

"Your feet, your muscles, your lungs, all your body has not yet forgotten and keeps saying to the brain, when the brain wishes to lead it along the same hard path: No, I shall not come, I have suffered too much on this path. And the brain accepts the refusal, obeying without arguing the silent language of its comrades." Maupassant as quoted by Bykov (1957, p.27)

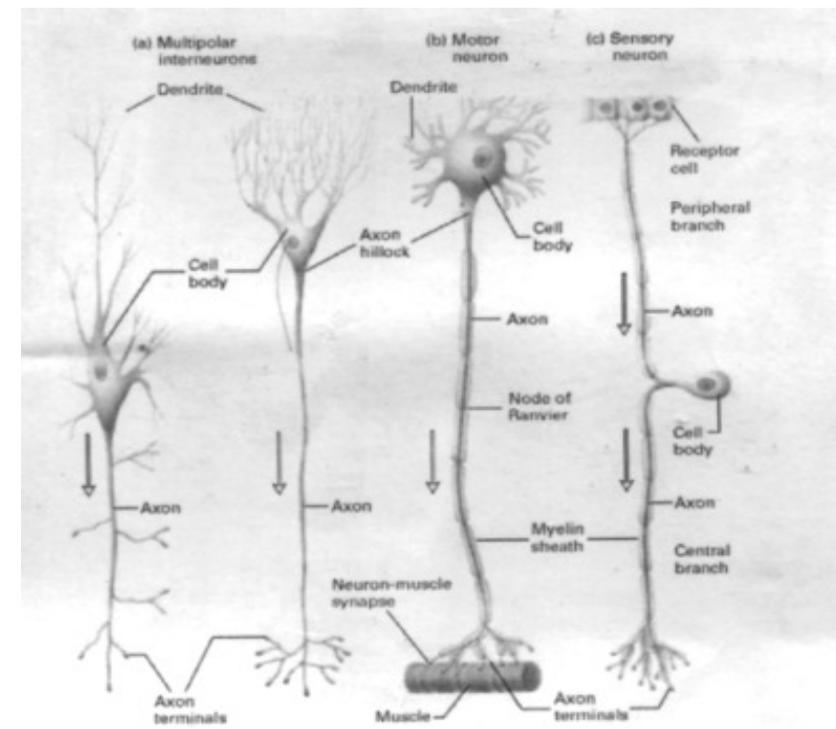
[CR- conditioned response, CS- conditioned stimulus, UCR- unconditioned response, UCS- unconditioned stimulus]

### Introduction

At the most basic level, animal nervous system function with its special structure. It is essential to know the basics for our discussion regarding inhibition procedure of the nervous system and specifically Pavlovian concept of inhibition.

The nervous system coordinates its voluntary and involuntary actions and transmits signals between different parts of its body. It has broad two divisions—central nervous system (CNS) comprising of brain and spinal cord and peripheral nervous system (PNS) consists mainly of nerves, which are enclosed bundles of the long fibres or axons, that connect the CNS to every other part of body. The PNS includes motor neurons, mediating voluntary movement; the autonomic nervous system, comprising the sympathetic and parasympathetic nervous system, which regulate involuntary or visceral functions.

At the cellular level neurons or nerve cells are the basic functional units of the nervous system. They have a number of different structures which distinguish them from any other cell in the body. These are dendrites that receive information from inside or outside body, cell body that analyses the information and axon through which the neuron performs its desire. Axon is covered by myelin sheath like electrical wire and in this covering there are some gaps that we call nodes of Ranvier and finally at the end of the axons there are pad like synaptic end-bulb that is making joint or junction or connected either with other neurons in synapses or connected with neuro-muscular, neuroglandular organs.



Neurons send signals rapidly and precisely to other cells. These signals are electrochemical waves travelling along axons, which cause chemicals called neurotransmitters to be released at junctions called synapses. A cell that receives a synaptic signal from a neuron may be

excited, inhibited, or otherwise modulated providing experience-dependent plasticity. The connections between neurons can form neural circuits and also neural networks that generate and our perception of the world and determine our nature. Along with neurons (10%) the nervous system contain other specialized cells called glial cells (80%+ 10% blood vessels etc.), which provide structural and metabolic support.

In nervous system communication is a most important thing and it is done through synapses. Through synapses neurons communicate with each other across a narrow gap called the synaptic cleft. A nerve impulse, which begins as an electrical signal in the presynaptic neuron, will be translated chemically across the synaptic cleft by a neurotransmitter, but will be translated back into an electrical signal once it reaches the postsynaptic neuron.

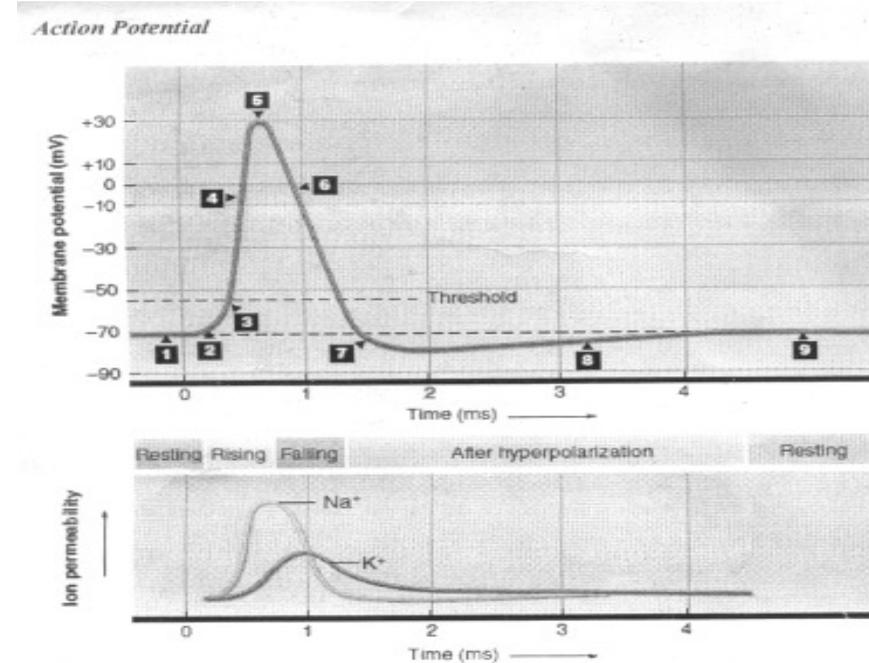
Neurotransmitters are of two types rapidly acting and slowly acting. Rapidly acting strong neurotransmitters are Acetylcholine and Norepinephrine and there are innumerable neuropeptides that acting slowly sometimes feebly as neurotransmitter. Once the neurotransmitter bind to receptors on the postsynaptic neuron, the message becomes electrical once again. This can result in either an excitatory postsynaptic potential (EPSP) or an inhibitory postsynaptic potential (IPSP). Both of this phenomenas are active process. In the axon hillock, the sum total of all incoming EPSPs and IPSPs is tallied and this will determine whether an action potential is triggered.

There are multiple ways that a cell can send signals to other cells. One is by releasing chemicals called hormones into the internal circulation, so that they can diffuse to distant sites. In contrast to this 'broadcast' mode of signalling, the nervous system provides 'point-to-point' signals-neurons project their axons to specific target areas and make synaptic junctions with specific target cells. Thus neural signalling is capable of a much higher level of specificity than hormonal signaling.

Nervous system controls the body by extracting information from the environment using sensory receptors, sending signals (mostly Pavlovian first signaling system) that encode this information into the CNS, processing the information to determine an appropriate response, and sending output signals to muscles or glands to activate the response. In million years a complex nervous system has made it possible for various animal species to have complex perception abilities such as vision, complex social interactions, rapid coordination of organ systems, and integrative processing of concurrent signals. In humans, the complexities of the nervous system makes it possible to have language (creating Pavlovian second signaling system), abstract representation of concepts, transmission of culture, and many other features of human society that would not exist without the human brain.

Now we have to know how the neurons transmit impulses. A nerve impulse is an electrical signal, created when stimulus is substantial enough to change the electrical potential of the cell membrane. The membrane potential of a cellular structure is determined by the in-flow and out-flow of sodium and potassium. Although this electrical charge is extremely localized on the cell membrane, it is propagated along the length of the neuron so long as the initial stimulus is greater than the threshold potential.

The threshold potential is partly determined by the extent to which the membrane is polarized. If a membrane becomes too polarized, this will inhibit impulse propagation. When depolarization occurs, however, the cell is said to be 'excited'. Here two factors determine the velocity of impulse propagation namely myelination and diameter of the axon.



1. Resting membrane potential 2. Depolarizing stimulus 3. Membrane polarized to threshold 4. Rapid  $\text{Na}^+$  entry 5.  $\text{Na}^+$  channels close;  $\text{K}^+$  channels open 6.  $\text{K}^+$  moves into extracellular fluid 7. Hyperpolarization occurs 8.  $\text{K}^+$  channels close 9. Cells returns to resting membrane potential.

The human brain is incredibly complex, but for our purposes, we will divide it into four major regions-1. Cerebrum composed of primary motor cortex, basal ganglia, primary sensory cortex. Within the sensory cortex there is frontal lobe for general intellect and motor control, temporal lobe for auditory input and interpretation, parietal lobe for general sensory input and interpretation, occipital lobe for visual input and interpretation and insular lobe for diverse functions usually linked to emotion and self-perception. Next comes 2. mid brain comprising thalamus and hypothalamus. Then comes 3. Cerebellum and lastly 4. brain stem comprising reticular formation and downward extension of spinal cord with a formation of an extensive network throughout the body as peripheral nervous system (PNS).

The spinal cord is specially designed to allow two-way conduction of nerve impulses, with sensory (afferent) fibres carrying signals from sensory receptors to the brain, while motor (efferent) fibres originate in the brain and transmits action potentials to end organs.

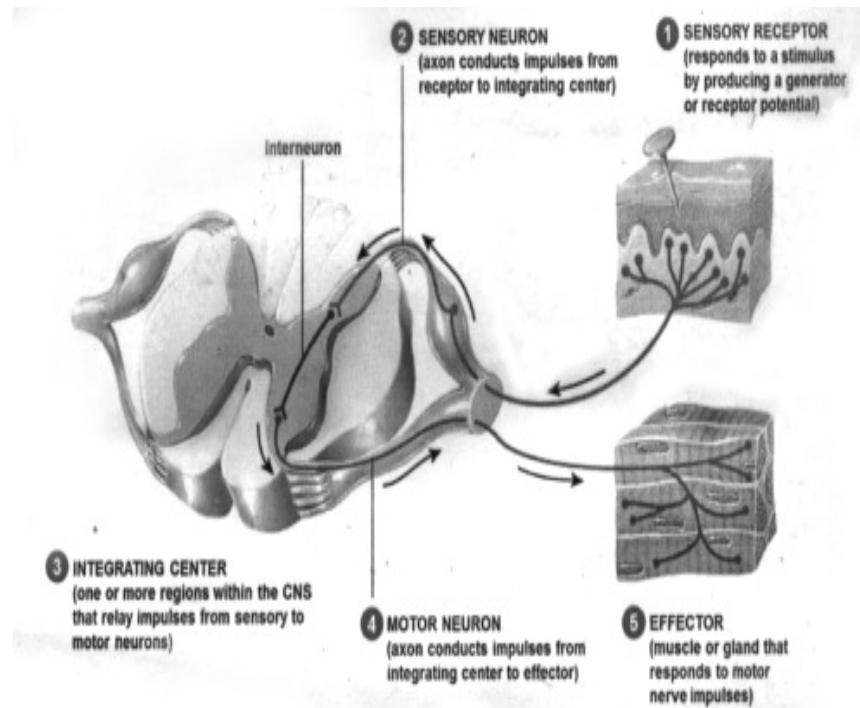
Though we began with the structure and function of nerve cells, it's important to take a closer look at the PNS. In all, it contains 43 pairs of nerves: 31 spinal and 12 cranial. There are also special subdivisions of the PNS.

Sensory neurons are vital to maintaining equilibrium in an environment that is in constant flux. There are five primary types of receptors, all of which are important to sport and athletic mobility: mechanoreceptors, thermoreceptors, nociceptors, photoreceptors and chemoreceptors.

Once sensory information has been processed by the CNS, a response is calibrated and corresponding instructions are sent to the relevant organs of the body, via motor neurons. The motor division is often divided into: 1. autonomic nervous system with sympathetic and parasympathetic division controlling the internal organs or viscera and somatic division controlling the voluntary skeletal muscles.

Regardless of where the sensory impulse ends up, it may elicit a motor response in the form of reflex as soon as a stimulus is received. It may originate at the level of 1. spinal cord, 2. lower brain and 3. motor cortex. As we expect the lower the origin of the response within the CNS, the simpler the response will be. What's interesting about reflex pathways is that they also assist with sensory-motor integration under certain conditions. This is where the idea of 'muscle memory' comes from, though this shouldn't be confused with motor reflexes exactly.

### Spinal Reflex



### Concept of Inhibition

Inhibition is an independent nerve process which is caused by excitation and manifested by the suppression of another excitation. Inhibition means to slow down the excitation effect of the CNS. Inhibition is the process whereby nerves can retard or prevent the functioning of an organ or part (inhibition of the heart by the vagus nerve). Inhibition is the reduction of a reflex or other activity as the result of an antagonistic stimulation. Inhibition is a state created

at synapses making them less excitable by other sources of stimulation. Roles of inhibition is protection (as antagonism protection), coordination (inhibition of nervous process in the CNS that ensures the harmonious activity).

Excitatory post synaptic potential (EPSP) moves the cell of the post synaptic membrane toward the threshold level by allowing positive ions to enter in the cells as result of opening the ligand ions channels. The larger the EPSP the more like the action potential is to fire. Inhibitory post synaptic stimulation moves the cell of the post synaptic membrane away from the threshold level due to the movement of negative ions into the cell or positive ions out of the cell.

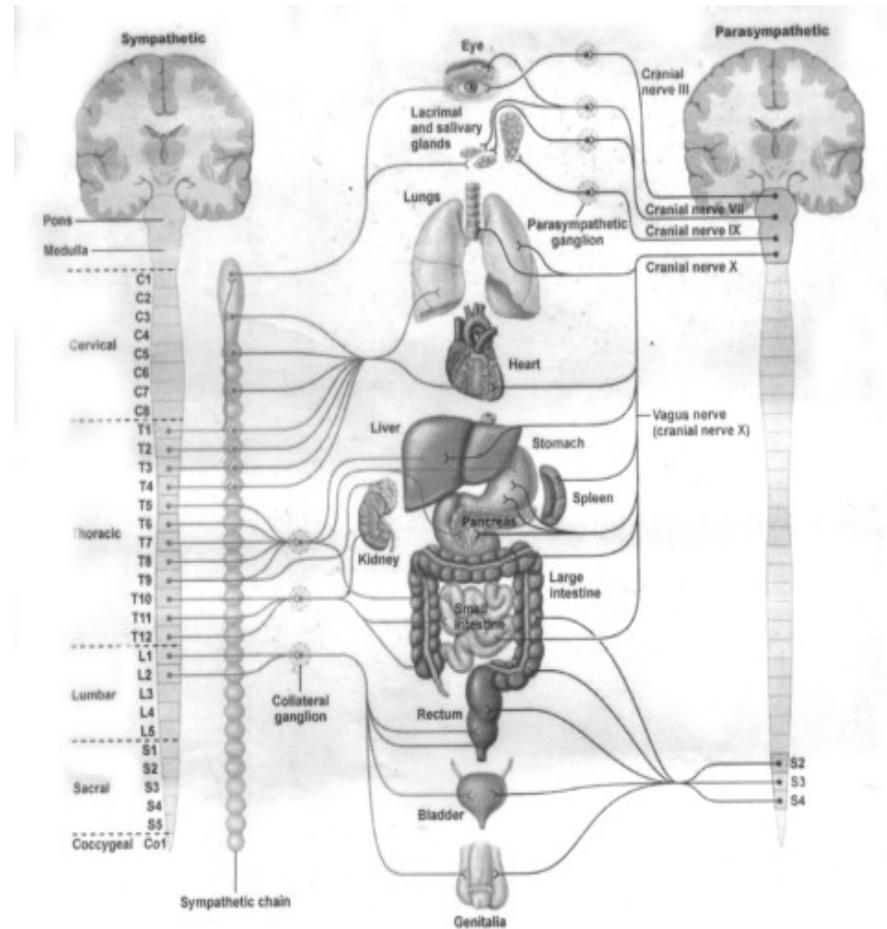
Gama amino-beutamic acid (GABA) is used at the great majority of fast inhibitory synapses in virtually every part of the brain. Many sedative tranquilizing drugs act by enhancing the effects of GABA. Glycine, a neuropeptide is a inhibitor of the spinal cord. Dopamine also plays some role in this inhibitory system at the cortical and subcortical level.

Generally there are five types of inhibition namely lateral, reciprocal, Renshaw (after Renshaw, who discovered it in 1946), inhibition following excitation and pessimal. Lateral inhibition is used through the nervous system to sharpen signal transmission. This process uses inhibition of the input from the peripheral of the receptive field to better define the boundaries of the excited zone. Motor and sensory system use this mechanism to focus and sharpen its signals (eyes). In reciprocal inhibition the CNS sends a message to the agonist (muscle causing movement) to contract, the tension in the antagonist (muscle opposing movement) is inhibited by impulses from motor neurons, and thus must simultaneously relax. This neural phenomenon is called reciprocal inhibition. The teleological principle is obvious. When a group of muscles, say the flexors of the elbow contract the opposing (antagonist) muscles, (extensors of the elbow in this example), must relax to ensure flexion.

In Renshaw inhibition the big sized anterior horn cells (neuron) of the spinal cord, emerge A-alpha motoneurons which end in the skeletal muscles. Now, upper motor neuron or corticospinal (pyramidal) tract fibers impinge on these A-alpha motoneurons. Therefore, when the corticospinal tract fires, A-alpha motoneurons are stimulated. Collaterals from the A-alpha motoneurons emerge and impinge upon cells, called Renshaw cells. When the A-alpha fibers are stimulated, the Renshaw cells, therefore are also stimulated. The axon of the Renshaw cell now inhibit the neuron soma of the A-alpha neuron cell. So that even if the corticospinal tract fires repetitively, the frequency of the muscle contraction remains less and thus the muscle is protected against too high frequency stimuli.

Pessimal inhibition develops in the excitatory synapses as a result of strong depolarization of the post-synaptic membrane under the influence of nerve impulses arriving too frequently. The intermediate neuron of spinal cord neurons of the reticular formation are particularly liable to pessimal inhibition.

Central inhibition is discovered by Sechenov. It is an active nervous process arising in the CNS and leading to the suppression or prevention of excitation. A distinction is made between postsynaptic inhibition, which involves the action of a specific mediator on the postsynaptic membrane of a neuron, and presynaptic inhibition, which is based on the depolarization of a presynaptic nerve ending at the point of contact with another axonal nerve ending. All types of inhibition occurring in conditioned reflex activity are regarded as forms of central inhibition.



*Action of the Nervous System* had two major effects. First it established that 'reflex' is the basic structural and functional unit of nerve-muscle-glandular physiology. It works through synapses (named by Sherrington). Secondly though being in the lowermost part in the CNS yet the spinal cord acts as an organ of integration, coordinating the activities of individual organs. He called integrative action as the action we commonly find in individual reflexes or collections of them cannot be understood isolately. For example in any external stimulus suppose touch would lead to antagonistic reaction that produce both flexion and extension of the limb. But finally after integrative action of the neurons one group of muscles either flexor or extensor temporarily dominate and outwardly we see the action. Here while the limb is flexed, the muscle producing the antagonistic movement is inhibited. So in any spinal cord stimulation there are simultaneously two actions one stimulation to the protagonist muscle and the other reciprocal inhibition of the antagonist muscle.

We have to remember that inhibition does not remain the same ratio of excitation at all intensities of flexion and of extension. The ratio varies in the case of flexion with the intensity of flexion itself; and in the case of extension it varies inversely with the intensity of the flexion against which it is pitted in a compound reflex. This variation is perhaps of fundamental significance.

When the CNS sends a message to the agonist muscle (muscle causing movement) to contract, the tension in the antagonist muscle (muscle opposing movement) is inhibited by impulses from motor neurons, and thus must simultaneously relax. This neural phenomenon is called 'reciprocal inhibition'. This inhibition is accomplished by the actions of an inhibitory interneuron in the spinal cord.

So now we can imagine when an athlete completes hundred meter run in 9.5 seconds what sort of integration is going on inside his CNS specially in the spinal cord. Sherrington called this integrative action as 'final common path' of motor neuron's activity controlling all our skeletal muscles. In all our physical works this processes are running. So according to Sherrington individual reflexes or their simple sum tell us little. This is one of the reasons that Sherrington did not venture his research works beyond spinal cord (*i.e.* brain) to avoid this complexities. Over and above in a private communication he written to Pavlov that your research works (*i.e.* with higher nervous system) 'smacks materialism' so it would not be accepted or popular in West (Pavlov, 1955).

Apart there are many influences at work on Pavlov to bring him to the decision to investigate 'psychic activity' by the objective method of science. In his long career as an experimental scientist he has developed an unique method to investigate the nervous functions of lower order specifically of blood circulation and digestion. So we can say as a scientist he was prepared in all sense for investigation of higher nervous functions as he was very much preoccupied anything regarding nervous system functions. But at that time it was not an easy thing to investigate higher functions of nervous system because brain physiology was in a blind alley posed an irresistible challenge to him. The situation of psychology, in all likelihood was off entirely on the wrong scent, not yet a science. It was broadly and largely a speculative and introspective discipline used for reactionary purposes. The essence of this speculative ideas are mystery of the soul and the doctrine of eternal human nature, forever unchanging. Actually in a scientific spirit Pavlov challenged this idea with utmost courage and determination.

### Pavlovian Concept

Pavlov's chief concern regarding the nervous system was how it works and how it regulate, control and maintain the homeostasis of the body and mind with internal and external environment. He started his research career with the works of internal environment such as circulatory system and digestive system. During his works with digestive system he assumed the 'psychic secretion' was the key to understanding animal's nature moulded by lifetime experience. He was aware of the works of British neurophysiologist Sir Charles Sherrington. He was also influenced by Sherrington's work. So to understand Pavlov's theory it is necessary to know a little about Sherrington's work.

Sherrington was awarded Nobel Prize for his works on spinal cord of the nervous system in 1932 though his works had been published in 1906. His famous book *The Integrative*

Pavlov got this courage from his predecessor I. M. Sechenov and more especially from his book *The Reflexes of the Brain*. Pavlov developed an experimental mindset with full of scientific insights and important ground-breaking for a physiology of the brain. Pavlov himself attested this situation, "And I take it that the most important motive for my decision, even though an unconscious one, arose out of the impression made upon me during my youth by the monograph of I. M. Sechenov, the father of Russian physiology, entitled *Reflexes of the Brain* and published in 1863 . . . . In this book, a brilliant attempt was made, altogether extraordinary for that time (of course, only theoretically, as a physiological outline), to represent our subjective world from the standpoint of pure physiology." (*Lectures on Conditioned Reflexes*, p. 39)

We introduce the reader briefly that in 1862, Sechenov went to Paris where, in father of physiology Claude Bernard's laboratory, he carried out an experimental investigation of the nervous centres which inhibit reflex movements. After returned to Moscow he wrote a treatise based on these experiments, published in a medical journal in 1863 under the title *Reflexes of the Brain*. In this treatise Sechenov states that he has decided "to communicate to the world some ideas concerning the psychical activity of the brain-ideas which have never been expounded in the literature of physiology."

So actually Sechenov had thrown out the challenge to establish 'the physiological basis of psychic activity'. It is a long tradition of doctrine of 'soul', 'spirit' etc. that completely separate body and mind and here psychical activities entirely depend on sense experience. Whereas at that time Sechenov was enamoured with the materialistic philosophical doctrine of Locke and Darwinian's evolutionary theory that taught him that all phenomena have a history including origin and development from lower forms. Specifically Sechenov based his thinking on the physiology of the reflex developed by many scientists, including Claude Bernard.

In his experiment with frog Sechenov found that application of a crystal of common salt or a weak electrical stimulus to the section of the thalamus markedly prolonged the reflex time. From this experiment he concluded that there were nerve centers in the thalamic region of the frog brain producing an inhibitory influence on spinal reflexes. Sechenov correctly evaluated the great importance of the phenomenon of central inhibition he had discovered, and used it in his theoretical work to explain the physiological mechanisms of human nature.

What are the inherent procedure of protection of the nervous system and its apex. Because the brain cells or neurons and specifically the cells of the cerebral cortex are the most sensitive and reactive cells not only of all the cells of the body but in all of nature. So they need protection for periodic fatigue, overstrain or any functional or structural damage. So in the nervous system there must be some mechanism for protection of this vital cells. According to Pavlov this is protective inhibition. The most common form of protective inhibition is sleep.

According to Pavlov inhibition is a basic neural process that worked with excitation to regulate the workings of the brain. For Pavlov, inhibition meant the suppression of neural activity, directly opposing the activation produced by excitation. It is now established that excitation and inhibition are characteristics of neural activity that function in a dialectical relationship.

Now we shall see how inhibition helps for subtle analysis of environment by means of conditioned reflexes. The relationship of the unconditioned and conditioned reflex apparatuses, resulting in a sifting of stimuli, is only the bare beginning of the complex discriminations performed by the higher nervous processes, and more particularly by the cerebral hemisphere. The letter not only sift the stimuli in the first place, but they make the most subtle analysis of those admitted for processing, that is, those which have previously been connected by temporal coincidence with the vital permanent reflexes. The temporary conditioned connection is refined and specialized, and broken up into its constituent parts. It is subjected to the most complex disintegration, and then it is synthesized into the total functioning of the organism. This analytical and synthetical work of the hemispheres accounts for the vastness and depth of adaptation or equilibrium of an animal with its environment.

The analysis performed by the hemispheres is, perhaps, the most intricate of their functions. It involves the process of inhibition as well as of excitation. In *Lecture* Pavlov says, "Nervous activity consists in general of the phenomena of excitation and inhibition. These are so to speak, its two halves. I shall not commit a great error if I liken these two phenomena to positive and negative electricity." (p.36)

The formation of new temporary connections is essentially a process of excitation and synthesis. But it is not enough simply to form new connections. To attain to a proper relation of the organism to the surroundings there is required in addition a continual and rapid adjustment of the temporary reflexes toward a greater and greater conformity to the external environment-or to extinguish them if there is no conformity at all. It is the work of analysis and inhibition to carry out the tasks of *correction* of conditioned or temporary reflexes, thus bringing them into line with objective reality. In *Lecture* Pavlov wrote, "The whole behaviour of the animal is included in this *synthesis* and *analysis*. In order to maintain an equilibrium with the surroundings, it is essential, on the one hand, to analyze as well as to synthesize the external world, because not only simple separate agents act on the animal but also their combinations. . . . The basic processes upon which this synthesis and this analysis are founded, are, on the one hand, the excitatory, and on the other hand, the inhibitory process-this latter a kind of opposite to the excitatory process." (p.221)

According to Pavlov in case of excitatory and inhibitory conditioning, a CS that more or less reliably predicts a UCS is termed an excitatory CS; it is effective in producing a CR. A CS that more or less reliably predicts no UCS is termed an inhibitory CS; it does not produce a CR. According to some theories, such as Pavlov's and Konorski's (1948), an inhibitory CS may actually produce a response opposite to the CR. Note that here *excitatory* and *inhibitory* refer to the predictive character of the CS, not to whether what is predicted is good or bad. Thus, an excitatory CS may predict food or strong shock.

Sometimes if other conditioned stimuli, which earlier had been paired with food, are presented, the dog may not respond to them or to feed itself. Oddly, if the dog does not react to conditioned stimuli, it responds more strongly to weak stimuli than to strong ones. Pavlov called this the *paradoxical phase* of extinction. In Pavlov's experiments, a weak light CS produced a stronger reaction than a shrill whistle, both of which were paired with food equally in the past.

As the tone continues to be presented in extinction, the equalization phase appears. This stage described by Pavlov that occurs during prolonged extinction training. During this phase,

both strong and weak CSs produce the same magnitude CR. While awake, the dog responds with equal vigor to presentations of weak and strong conditioned stimuli. Finally, this stage gives way to the ultraparadoxical phase, in which positive CSs produce no responses but negative CSs produce CRs. In Pavlov's experiments, the dog responded to the tone (the negative CS) but not to the conditioned stimuli that signaled food (the positive CSs).

Pavlov felt that these stages were due to the building up of inhibition produced by presentations of the tone without the food UCS and that this build-up upset the normal balance of excitation and inhibition in the brain. This inhibition also produced sleep, even in rested and alert subjects.

The dog's behaviour as it passed through these stages often seemed disturbed condition and was interpreted as indicating a form of neurosis, called *experimental neurosis*. This kind of bizarre behaviour brought on by the presentation of an insoluble problem after experience with similar problems that were soluble. Pavlov believed that a disruption of normal excitation and inhibition in the brain accounted for experimental neurosis. A fine analysis of the stages through which the dogs passed, as shown in their behaviour, corresponds closely to a categorization of states of mental illness in humans (Platonov, 1959). According to Pavlov this is due to disturbances of excitatory and inhibitory factors.

In another experiment Pavlov found *conditioned inhibition* and *differential inhibition*. (*Lecture*, p. 213) If tone is followed by food, and then on other occasions another stimulus (such as light) is presented with the tone but without food, we find that the CR to the tone/light pair quickly disappears. The tone presented by itself still has its expected effect, and the light presented alone has, of course no effect. The light has become a conditioned inhibitor, and conditioned inhibition is just a case of the more general principle of differential inhibition, or the inhibition that accompanies the formation of a discrimination (or a differentiation, in Pavlov's terms).

The normal method for the training of a discrimination is to alternate presentations of one CS with food, for example, and presentations of one or more other stimuli without food (that is, in extinction). This is Pavlov's method of contrasts, and it is an excellent way to render a stimulus (the negative CS presented without food) inhibitory. The reasons for this will be clear when the operation of Pavlov's field is considered. The inhibition produced in this way may be disinhibited; differential inhibition was very important in Pavlov's interpretation of the way in which we learn to discriminate objects in our world.

### **Pavlovian Brain Type**

Also it is called types of higher nervous activity. It is developed in an adult mature man as his personality type due to congenital and acquired characteristics of the nervous system. This determines the individual differences regarding their nature and reaction to external stimulus. Pavlov has introduced it in the higher nervous system. Here basic activities of the nervous processes working in the cerebral cortex are excitation and inhibition.

According to Pavlov the classification of types of nervous systems is based on the force, balance, and mobility of excitation and inhibition. The neural processes may be strong or weak, depending on the competence of the cortical cells. By balance is meant the equal force of the neural processes. Excitation and inhibition may be balanced or unbalanced, depending on the correlation of their force. That is both processes may be equally strong or may dominate.

The neural processes of the all animals are divided according to their force into strong, with highly pronounced excitation and inhibition, and weak, with limited excitation and inhibition. Animals with a strong type of nervous system are subdivided according to the balance of the neural processes. That is, they are subdivided according to the correlation of excitation and inhibition into an unbalanced type, in which excitation is dominant, and a balanced type, in which excitation and inhibition are equally strong. Animals of the strong balanced type are divided according to the mobility of the neural processes into an inert, or slow, type and a mobile, or rapid type. In the strong unbalanced, or unrestrained (excitable), type, both neural processes have great force, but excitation distinctly prevails over inhibition. Positive conditioned reflexes develop with relative ease in animals (for example, dogs) that have this type of nervous system, but inhibitory conditioned reflexes develop with great difficulty and require long conditioning. The differentiating reflex is not always complete and is easily disinhibited. Higher nervous activity caused by pronounced inhibition is difficult and often impossible for such animals, since a conflict arises between the weakened process of inhibition and the greatly intensified process of excitation.

But not all strong type dogs are alike. Pavlov found a major division among them on the basis of the equilibration of the processes of excitation and inhibition. One group showed a marked predominance of the excitatory over the inhibitory process, and Pavlov called this the strong but unequilibrated type. These dogs could establish positive conditioned connections quickly and easily and had great ability to endure powerful and protracted stimuli. However, they had severe difficulty in developing conditioned inhibitory connections. In short, they were a highly excitable type, in which had developed a disequilibrium, or disproportion, between excitation and inhibition.

There are then according to Pavlov four essential types of higher nervous activity in animals: two extremes, namely, the weak inhibitory and the strong excitable; and two forms of the strong but balanced or equilibrated, namely lively and quiet.

### **Protective Inhibition**

Exceedingly sensitive and delicate neurons are subject to damage resulting from excessive strain. Protection is afforded by the inhibitory process which ensues after a prolonged action of the conditioned stimulus without the unconditioned. It will be recalled when an indifferent stimulus that has been temporarily connected to the food reflex, is repeated without reinforcement by feeding, it soon is extinguished by inhibition. This process relieves the concerning cells from unnecessary strain and thus allows them to rest and restore themselves.

Another form of protection of the cerebral cells from overstrain is what Pavlov called 'the law of the limit of intensity of stimulation'. For every type of nervous system there is a maximum stimulus, a limit of harmless functional strain, beyond which begins the intervention of inhibition. A stimulus, the intensity of which is beyond this maximal limit, instantly induces inhibition. Again the inhibition is a form of rest and restoration. Thus does the nervous system insure its vital units, the cells, from damage by excessive stimulation and over-work.

The law of the maximum margin of stimulation leads to some of the contradictory aspects of nervous activity. Thus a strong stimulus, if it exceeds or nearly exceeds the limit, may produce a smaller effect than a weak one. This phenomenon Pavlov called the *paradoxical phase*.

But the primary form of protection of the cells of the cerebral hemispheres is the one we are all very familiar with, namely, sleep. Sleep is a form of protective inhibition. Inhibition, as already noted, has a tendency to spread or irradiate throughout the hemispheres unless or until it is counteracted by its opposite, excitation in the form of some stimulus from the internal or external environment. If it is not checked by such excitation it expresses itself as partial or total sleep. Partial sleep, where inhibition spreads over a considerable part, but not all of the hemispheres, is hypnosis. In this case, countering excitation is present in sufficient intensity only to check the irradiation of inhibition but not to bring about the opposite process of concentration of excitation. The state of normal sleep, on the other hand, develops when inhibition reaches its climax both in intensity and extensiveness, spreading over the entire mass of the hemispheres and penetrating down into the lower portions of the brain to a certain depth.

Sleep is the absolutely essential periodic rest and restoration of the most delicate and sensitive products of the material world, the cells of the cerebral hemispheres. We all know only too well what effect the excessive lack of sleep has on our ability to see and hear, let alone think or speak. Little wonder that deep, untroubled sleep has always been accounted one of the greatest blessings of man.

Protective inhibition is the ever vigilant guardian of the hemispheres. It can be said either that sleep is a form of inhibition or that inhibition is a form of sleep. For cerebral or conditioned inhibition (what Pavlov also called internal inhibition) and sleep are and the same process. But there is, of course, a difference. Pavlov answers of this difference in *Lecture*, "Inhibition is a partial, fragmentary, narrowly limited, strictly localized sleep, confined within boundaries under the influence of the opposing process—that of excitation; sleep on the contrary is an inhibition which has spread over a greater section of the cerebrum, over the entire hemispheres and even into the lower lying midbrain ... either the inhibition spreads and sleep sets in, or the inhibition is limited and sleep disappears." (p.311)

Thus, sleep, in its limited or total state, is the great protector of the health of the higher nervous process and hence of the total organism. And sleep means rest and restoration of the neurons of the brain. Sleep, rest and restoration, these are the primary keys to maintenance of health and normal functioning. Inhibition is clearly just as important an aspect of higher nervous activity as is excitation. Pavlov says, "Thus inhibition has two chief roles—adjusting the organism to its surroundings, and secondly leading to sleep." (p.64) It is both adaptive and protective. It refines, through analysis, the conditioned reflexes to the external environment; and it protects, through the various forms of sleep, ultra sensitive cells of the hemispheres.

Excitation forms the new connections, but to pin-point stimuli irradiation must be limited by the opposite process, inhibition. The irradiation of inhibition, leading to sleep, protects the hemispheres, but to maintain a waking state and to perform analytical work, inhibition must be limited by excitation. The healthy functioning of the organism depends on the establishment and maintenance of a dynamic equilibrium between excitation and inhibition. Pavlov says, "The entire behaviour of the animal is dependent upon the balancing of the excitatory and the inhibitory processes, and upon the adaptation of these two to the various agents of the external world." (p.333)

### Pavlovian nomenclature

Now we can discuss some of the Pavlovian nomenclature related to inhibition. This are excerpts from *Lectures on conditioned Reflexes, Volume II: Conditioned Reflexes and Psychiatry*.

Suppose in 'inhibition of delay' a decrease in responding is seen that occurs during the early part of the delay period during delayed conditioning. Pavlov believed that this was due to the fact that time acted as a CS and since the time just after the onset of the CS was never accompanied by the UCS, it became inhibitory. A handclap could restore responding during this period, showing the disinhibition of inhibition of delay. Regarding 'inhibitory conditioning' it is seen that in this procedure in which a CS reliably signals the absence of a UCS. This is the opposite of excitatory conditioning. In 'external inhibition' it is seen that suppression of a CR produced by the introduction of a stimulus that produces a competing response. For example, conditioned salivation by a dog may be disrupted if the dog's name is suddenly called in a loud voice.

In 'extinction' it is seen decrease and eventual disappearance of a CR, which happens when the CS is repeatedly presented without a UCS. Pavlov believed that extinction brought about the inhibition of the CR. In opposite to extinction we find 'acquisition' where the development of an ever-stronger and more reliable CR through conditioning is seen. Further a dog without cerebral hemispheres does not react to the mass of stimuli falling on him from the external world, the external world for him is, so to speak, contracted. Such a dog is not able to extinguish reflexes, for example, inhibition of the orienting reflex (investigatory reflex or What it is?) takes place only after many repetitions, while in the normal animal extinction occurs after 3-5 repetitions.

In a condition of dogs, Pavlov said it is suffering from *hypersthenia* where the dogs were of the excitatory and strong type, the neurosis or small mental abnormality consisted in almost complete disappearance of the inhibitory reflexes, *i.e.*, a marked weakening almost zero of the inhibitory process.

Pavlov used a method that he called 'Algebraic summation' to demonstrate the inhibitory and excitatory properties of CSs by pairing them with other CSs. For example, an inhibitory CS introduced along with another CS will cause a decrease in responding to the latter. A positive CS presented with another positive CS should produce a response greater than that to either of the individual stimuli. This method also was used by Rescorla (1969).

According to Pavlov hypnosis is a functional paralytic condition of the motor skeletal musculature, especially of those muscles most concerned with the given excitation ... animals stood like marble statues, drooling at the mouth but unable to take the food. Inhibition ... has a tendency to spread (irradiation), unless it meets with a counteraction in the conditions of a given environment. It expresses itself in phenomena of either partial or total sleep. Partial sleep is, evidently, the so-called hypnosis. Besides the conventional historical method of hypnotising dogs (turning them on the back and holding in this unnatural position) ... hypnosis can be produced by the continuation of one and the same stimulus, finally resulting in an inhibitory state of the corresponding cortical cells, representing on the one hand various degrees of tension and the other hand a varying extent of spread over the cerebral hemispheres and farther down into the brain. So hypnotic phase is the intermediate phase

between the waking state and complete sleep.

Naturally with the greater complexity of the human brain the hypnotic phenomena are considerably more varied in the human than in the animal. But it is possible that some of the hypnotic phenomena for one or another reason are more clearly marked in the animal, the more so because human hypnosis presents considerable variations depending upon the individual and the methods of hypnotization.

Due to the weakness of the cerebral hemispheres in the hysteric there is a continual manifestation in different combinations of three special physiological phenomena: the readiness with which the hypnotic state occurs because even the habitual daily stimulations are ultraparadoxical and are accompanied by transmarginal overflow of inhibition (paradoxical phase), the extreme fixation and concentration of the nervous processes in separate points of the cortex, thanks to the predominance of the subcortex, and finally the extraordinary intensity and extension of the negative induction, *i.e.*, inhibition in consequence of the reduced positive tonus of the other parts of the cortex.

The basic processes of the whole CNS are obviously identical—excitation and inhibition. There is sufficient reason to believe that the chief laws of these processes are irradiation and *concentration* and their reciprocal relations. Concentration is the process that occurs during classical conditioning, specifically during discrimination learning. Early and late in training, excitation and inhibition associated with CS+ and CS- irradiate (spread). Midway in training, excitation and inhibition concentrate, or remain close to their respective brain centers. Concentration is the opposite of irradiation.

In conditioned reflex the organism responds with a definite complex activity to an external excitation to which it did not respond previously. A temporary connection between an external agent and the activity of the organism called forth in response to it.

Regarding unconditioned reflex Pavlov wrote, 'Making the cut [in the brain] still higher, extirpating only the cerebral hemispheres, you have very complex reflexes for the purpose of special movements to preserve the whole organism and its form. Such a dog arranges his internal activity well, and thanks to this he can remain healthy and live very much like a normal animal. He tries to get food, defends himself from every harm, does not tolerate a limitation of his movements; the orienting reflex is clearly present. These complex acts we call unconditioned reflexes. (p.61) A permanent connection between an external agent and the activity of the organism called forth in response to it. (p. 169)

Pavlov described a term as *backward conditioning* where it is a conditioning procedure in which the UCS precedes the CS. This was formerly thought to lead to no conditioning, but it has been recognized as the chief means for producing inhibitory conditioning.

Similarly Pavlov used a term as differentiation that we now use as 'discrimination formation'. It includes both the discriminating of stimuli and the associating of UCSs with appropriate stimuli.

Again in case of disinhibition Pavlov want to say the release from inhibition produced by a new stimulus, such as a handclap or a trumpet blare. This is evidenced by the appearance of responding in the presence of an inhibitory CS. PAS

## Stalin as Scientist

J.D. Bernal, F.R.S.

In thinking of Stalin as the greatest figure of contemporary history we should not overlook the fact that he was at the same time a great scientist, not only in his direct contribution to social science, but, even more, in the impetus and the opportunity he gave to every branch of science and technique and in the creation of the new, expanding and popular science of the Soviet Union.

Stalin's contribution to the development of science cannot be separated from his great work as the builder and preserver of socialism. He combined, as no man had before his time, a deep theoretical understanding with unflinching mastery of practice. And this was no accident. The success of Stalin both in his creative role and in his many battles against apparently overwhelming forces, was due precisely to his grasp of the science of Marxism as a living force. In learning from Marxism and in using Marxism he developed it still further. He will stand now and for all time beside Marx, Engels and Lenin, as one of the great formulators of the transforming of thought and society in the most critical stage of human evolution. In their different ways they each had crucial tasks to fulfil. Marx and Engels had to achieve the first knowledge of the nature of capitalist exploitation and of scientific socialism, at a time when the domination of capitalism seemed assured beyond any question, and had to create the methods of dialectical materialism completely foreign to the official thought of the time. They had to bring to the newly emerging industrial working class the first consciousness of their strength and destiny. Lenin was the first to make the decisive break and, through the creation of a communist party of a new kind, succeeded by revolution in forming the first socialist state. But he lived only to see it triumphant against the first onslaught of its enemies. The task of turning a backward and half-ruined country into a great and prosperous industrial and military power, the task of showing that socialism would work, was, throughout all the crises of internal difficulties and external attack, the responsibility of Stalin and history records his success.

But though his was the guiding hand and his also the undaunted strength of purpose that all could rely on, this achievement was the achievement of hundreds of millions of men and women infused with the same determination and inspired by the same ideas. The true greatness of Stalin as a leader was his wonderful combination of a deeply scientific approach to all problems with his capacity for feeling and expressing himself in simple and direct human terms. His grasp of theory never left him without clear direction. His humanity always prevented him from becoming doctrinaire. He expressed himself on this point most clearly in his answer to Kholopov in the linguistics controversy :

'The dogmatists and talmudists regard Marxism and the various conclusions and formulae of Marxism as a collection of dogmas, which 'never' change, despite changes in the conditions of the development of society. They think that if they learn these conclusions and formulae by heart and begin to quote them without rhyme or reason,

they will be able to solve any problems whatever, reckoning that the memorized conclusions and formulae will serve them for every period and country, for every possible contingency. But this idea can be entertained only by people who see the letter of Marxism, but not its essence, who learn by rote the texts of conclusions and formulae of Marxism, but do not understand their content.

“Marxism is the science of the laws governing the development of nature and society, the science of the revolution of the oppressed and exploited masses, the science of the victory of Socialism in all countries, the science of building a Communist society. Marxism as a science cannot stand still, it develops and improves. In its development Marxism cannot but enrich itself with new experience, new knowledge—consequently its various formulae and conclusions cannot but change with the passage of time, cannot but be replaced by new formulae and conclusions, which correspond to the new historical tasks. Marxism does not recognize immutable conclusions and formulae, obligatory for all epochs and periods. Marxism is the enemy of all dogmatism.”

The study of Stalin’s written works needs to be related step by step with the actual political, social and economic problems which called them forth and which in turn they illuminate. In his youth he counted as a “practical” Marxist though this was largely because his success in revolutionary agitation masked his profound and wide reading. The amount of economic and philosophical material that this student from remote and backward Georgia mastered sixty years ago is enough to put to shame students of to-day in advanced centres of culture. It included such diverse works as Darwin’s *Descent of Man*, Lyell’s *Antiquity of Man*, Adam Smith’s and David Ricardo’s books on political economy, Victor Hugo’s *Toilers of the Sea*, Thackeray’s *Vanity Fair*, Buckle’s *History of Civilisation in England*, Mendeleev’s *Chemistry*, Spinoza’s *Ethics*, and the classics of Shakespeare, Schiller and Tolstoy. Already in the seminary of Tiflis, as his earliest writings show, he had seized on the essentially scientific character of Marxism. He could see that it was no arbitrary creation but the discovery of objective laws of nature and of society. That concept of scientific law never left him. He gave it its fullest expression in the last of his great contributions to Marxism, the *Economic Problems of Socialism in the U.S.S.R.* There at the outset he states categorically :

“Marxism regards laws of science—whether they be laws of natural science or laws of political economy—as the reflection of objective processes which take place independently of the will of man. Man may discover these laws, get to know them, study them, reckon with them in his activities and utilize them in the interests of society, but he cannot change or abolish them. Still less can he form or create new laws of science.”

Though Stalin had no professional connection with science, apart from a few months as an observer and computer at the observatory of Tiflis, he retained a lively and practical interest in the progress of science and his appreciation of its needs and difficulties was of decisive importance to the great efflorescence and transformation of science in the Soviet Union.

The chapter on “Dialectical Materialism” which Stalin contributed to the *History of the Communist Party of the Soviet Union* is the finest example of his range of understanding and his skill in exposition, which he had first shown in his *Anarchism or Socialism?* forty-six years

before. Set out simply and logically are the ideas on the development of the world and of society that are to be found scattered in many places and often obscurely expressed in the writings of Marx, Engels and Lenin. The simplicity is somewhat deceptive. In a short compass are ideas and formulations that are worth reading many times over and from which many new ideas and practical applications can be extracted. Particularly illuminating are his remarks on the science of the history of society which “despite all the complexity of the phenomena of social life can become as precise a science as, let us say, biology and capable of making use of the laws of the development of society for practical purposes” (*Leninism*, p. 601). Here also we find the idea which he developed further in *Concerning Marxism in Linguistics*, of the nature of ideological superstructure and of the importance of social ideas :

“New social ideas and theories arise only after the development of the material life of society has set new tasks before society. But once they have arisen they become a most potent force which facilitates the carrying out of the new tasks set by the development of the material life of society, a force which facilitates the progress of society. It is precisely here that the tremendous organizing, mobilizing and transforming value of new ideas, new theories, new political views and new political institutions manifests itself. New social ideas and theories arise precisely because they are necessary to society, because it is impossible to carry out the urgent tasks of development of the material life of society without their organizing, mobilizing and transforming action. Arising out of the new tasks set by the development of the material life of society, the new social ideas and theories force their way through, become the possession of the masses, mobilize and organize them against the moribund forces of society, and thus facilitate the overthrow of these forces which hamper the development of the material life of society” (*Leninism*, p. 603).

Throughout, and from the very beginning of his mastery of Marxism, Stalin maintained a dynamic conception of natural and social progress. He noted and confidently relied on the triumph of the growing, and the defeat of the decaying, forces of society whatever their apparent strength at the time. As early as 1906 he wrote.

“That in life which is born and grows day after day is invincible, its progress cannot be checked. That is to say, if, for example, the proletariat as a class is born and grows day after day, no matter how weak and small in numbers it may be today, in the long run, it must conquer. Why? Because it is growing, gaining strength and marching forward. On the other hand, that in life which grows old and is advancing to its grave must inevitably sustain defeat even if today it represents a titanic force. That is to say, if, for example, the ground is gradually slipping from under the feet of the bourgeoisie, and the latter is slipping further and further back every day, no matter how strong and numerous it may be today, it must, in the long run, sustain defeat. Why? Because as a class it is decaying, growing feeble, growing old, and becoming a burden to life” (*Anarchism or Socialism?*, J. Stalin, Foreign Languages Publishing House, Moscow, 1950).

It was this belief firmly founded on science that helped to surmount successive dangers without ever losing heart.

This exposition of Marxism is however only a nucleus to which Stalin added in practice

and theory contributions of his own. The major contribution, characteristic both of the man and of the creation of socialism in one country, can be summed up in one phrase—learning with the people. Stalin's capacity to learn was the secret of his success in action. It began with his first political experience. "My first teachers were the workers of Tiflis (*Pravda*, June 16, 1926) and it lasted to the very end as the *Economic Problems of Socialism in the U.S.S.R.* shows. It is the basis of his most celebrated parallel of Bolsheviks to the giant Antaeus of the fable who was strong only if he kept his feet on mother earth, "As long as they maintain connection with their mother, with the people, they have every chance of remaining invincible" (*History of the C.P.S.U. (B.)* p. 363).

It was this profound feeling for the people and for people as individuals that gave Stalin himself his sure touch in good and bad times alike. It was the basis for his judgment that kept a balance between doctrinaires who wished to push forward irrespective of circumstances, and the cautious time-servers who would go no faster than the slowest of the crowd. He showed it at its best in his decisive *Pravda* article of March 2, 1930, "Dizzy with Success", where he checked, and only just in time, the irresponsible and self-defeating forcing of the pace of collectivisation.

That great double transformation, the industrialisation of the Five Year plans, and the formation of collective farms is Stalin's most enduring monument but, though it needed profound economic and technical study and the greatest firmness of purpose in execution, it was only possible because it expressed the active will of the great majority of the peoples of the Soviet Union.

Shallow thinkers, philosophic defenders of "Western Civilisation," have accused Stalin of being motivated by love of power, but to those who have followed his thoughts and works, the accusation is only a revelation of utter ignorance. Stalin understood the nature of political power for too well to imagine that it was something that could be sought or held by any man or group of men. He knew that the events of political life only express the outcome of social forces, of the wills and aspirations of millions of men who can only be moved if and when the material conditions are propitious and they are conscious of this.

"It would be foolish to think that the production plan is a mere enumeration of figures and assignments. Actually, the production plan is the embodiment of the living and practical activity of millions of people. What makes our production plan real is the millions of working people who are creating a new life. What makes our plan real is the living people, it is you and I, our will to work, our readiness to work in the new way, our determination to carry out the plan" (*Leninism*, p. 387).

Over and over again by example and warning Stalin urged the need for the way of co-operation and persuasion and denounced the bureaucratic practice of administrative orders. He had nothing but contempt for the bogus "Führer prinzip" which led Hitler to his doom.

As he insisted once again in his last work, the laws of social progress are objective : they cannot be laid down, they must be discovered; and in the process of discovering them, there is always the possibility of revealing the new and unexpected. The transformation of capitalism to socialism and of socialism to communism produced many surprises, good as well as bad. It was Stalin's peculiar genius to detect and cherish the significant new manifestations. It came all the more naturally to him because of his ability to appreciate and cherish the

achievements of individuals and to learn the lessons they could teach.

The most striking example of this was his immediate seizing of the achievement of Stakhanov and his understanding that here was not merely someone who worked harder and more enthusiastically, but someone from the ranks of the workers who had mastered modern scientific technique and was able to combine it with his practical experience. Stalin saw at once that this opened the way to using the hitherto untapped reserves of intelligence of the people which capitalism could never touch, and that it broke at once the barriers of accepted standards of production. Here, for the first time in history, the workers were entering science in a positive way and science must make way for them :

"People talk about science. They say that the data of science, the data contained in technical handbooks and instructions, contradict the demands of the Stakhanovites for new and higher technical standards. But what kind of science are they talking about? The data of science have always been tested by practice, by experience. Science which has severed contact with practice, with experience—what sort of science is that? If science were the thing it is represented to be by certain of our conservative comrades, it would have perished for humanity long ago. Science is called science just because it does not recognize fetishes, just because it does not fear to raise its hand against the obsolete and antiquated, and because it lends an attentive ear to the voice of experience, of practice" (*Leninism*, p. 555).

This was his appreciation of the revolutionary effect of a whole working population contributing to the making of knowledge and not merely to the using of it. Stalin drew the moral in his toast to science at a gathering of workers in higher education in May, 1936:

"To the flourishing of science! Of such science as does not segregate itself from the people, does not keep aloof from the people but which is ready to serve the people, to place all its achievements at the disposal of the people; of the science which serves the people, not under constraint, but voluntarily, willingly ...

"To the flourishing of science! Of such science whose devotees, while realising the force and significance of the traditions established in science and making skilful use of them in the interests of science, yet refuse to be slave to these traditions; of science which has the daring and determination to shatter old traditions, standards, and methods when they become obsolete, when they turn into a brake on progress, and which is able to establish new traditions, new standards, new methods.

"In the course of its development science has known quite a number of courageous people who have been able to shatter the old and establish the new regardless of, and in the teeth of all obstacles. Such men of science as Galileo, Darwin, and many others are widely known. I should like to dwell on one such Corythacus of science who is at the same time the greatest man of modern science, I have in mind Lenin, our teacher, our mentor ...

"It also happens that new trails in science and technique are sometimes blazed, not by widely known scientists, but by people who are absolutely unknown in the scientific world, without academic degrees, practical workers in their fields of activity. But who does not know that Stakhanov and the Stakhanovites in their practical work in the field of industry scrapped as obsolete the existing standards established by well-

known men of science and technique and introduced new standards, corresponding to the demands of real science and technique? Who does not know that Papanin and the Papaninites in their practical work on the drifting ice-flow, incidentally without any special effort, serapped as obsolete the old conception of the Arctic and established a new one corresponding to the demands of real science? Who can deny that Stakhanov and Papanin are innovators in science, men of our advanced science?" (*International Book Review*, Nos. 1-2, published, Marx Memorial Library, 1938).

The development took shape even more clearly after the second World War with the recognition of the two complementary groups of worker-scientists, the rationalisers who continually improved production in detail and the innovators who provoke radical alterations in the mode of production.

The discovery of the unlimited new source of scientific and technical advancement that lay hidden, and was indeed actively suppressed by all earlier systems, will in the long run prove the greatest of benefits conferred to socialism. Stalin saw well how it was needed to pave the way to the next stage, the transition to communism. This involved the abolition of the essential distinction between mental and physical labour :

"It is necessary, in the third place, to ensure such a cultural advancement of society as will secure for all members of society, the all round development of their physical and mental abilities, so that the members of society may be in a position to receive an education sufficient to enable them to be active agents of social development (*Economic Problems of Socialism in the U.S.S.R.*, p. 76).

This would in itself require a shortening of the working day to six or even five hours.

"It is necessary, further, to introduce universal compulsory polytechnical education, which is required in order that the members of society might be able freely to choose their occupations and not be tied to some one occupation all their lives" (*Economic Problems of Socialism in the U.S.S.R.*, p. 77).

It is this development, made possible only by socialism, that will in turn make its triumph inevitable and rapid. A totally educated population is a power equivalent to billions of atom bombs and it is a constructive and not a destructive one. Already two years ago the Soviet Union was turning out more trained men and women than the United States and the disparity is bound to grow as long as capitalism persists and higher education is employed to ensure the dominance of a class. In this country the fatuous complacency of university authorities who accept a consolidation which is really a cut in an intake that represents 3.4 per cent of the age group, spells disaster to the economy, indeed to the very life, of the country. The new force that Stalin discovered and which he specially fostered could only be realized in a genuinely socialist state. He followed closely the transformation of the old bourgeois intelligentsia under the impetus of great technical developments, and its new widening through the entry of the working people to form the new Soviet intelligentsia.

"Our Soviet intelligentsia," he said in his speech on the Draft Constitution of the U.S.S.R., "is an entirely new intelligentsia bound up by its very roots with the working class and the peasantry .... Formerly it had to serve the wealthy classes, for it had no alternative. Today it must serve the people, for there are no longer any exploiting classes. And that is precisely who it is now an equal member of Soviet society, in

which, side by side with the workers and peasants, pulling together with them, it is engaged in building the new, classless, Socialist society" (*Leninism*, pp. 566, 567).

The real greatness of Stalin is shown most of all by the way in which he could keep an active balance between the material and the human elements in a developing society. No one knew better, no one understood more widely, the productive mechanism of modern industry, the need for raw materials, the need for technique and the application of science. But he was never hypnotised by that knowledge and experience into an inhuman faith in the machine, into any form of technocracy. Indeed he reserved his most bitter sarcasms for those who thought in this way, as the discussion on economic problems shows. He always put man first, "men produce not for production's sake, but in order to satisfy their needs... production divorced from the satisfaction of the needs of society withers and dies" (*Economic Problems of Socialism in the U.S.S.R.*, p. 84).

Stalin's concern for men and women also found expression in his concern for the advancement of oppressed people and nationalities who, far from being backward, contained, as he knew well from his own experience, even greater relative possibilities than those of so called advanced civilisations. In the world as a whole it will be Stalin's solution to the Nationalities question that has made the most lasting impact. He showed how to preserve the living core of national culture while raising the political, technical and economic lives of all peoples, even the most primitive, to the level of the highest. The contrast between the success of this method and the abject failure of the Point Four projects and Colombo Plans, emphasises the fundamental Marxist condition of the abolition of capitalist exploitation as an absolute necessity for the self-development of any country. That was a lesson which not only the republics of the Soviet Union have learned, but many other nations of Asia are already learning and all will learn in their time.

It was in this field too that Stalin made his most direct contribution to social science. His article *Concerning Marxism in Linguistics* is far more than its title indicates; it is an extension of Marxist thought over the whole social, cultural field particularly in the clear distinction it draws between the ideological superstructure limited to a period and serving a particular class, and general auxiliaries of social existence like language and material means of production that can, whatever their origin, serve a new as well as an old structure of classes. The same consideration certainly applies to science and Stalin's structures on the way it had been allowed to develop were a most valuable corrective to mechanical, stupid and uncritical applications of Marxism.

"It is generally recognized", he wrote, "that no science can develop and flourish without a battle of opinions, without freedom of criticism. But this generally recognized rule was ignored and flouted in the most unceremonious fashion. There arose a close group of inflexible leaders, who, having secured themselves against any possible criticism, became a law unto themselves and did whatever they pleased" (*Concerning Marxism in Linguistics*, "Soviet News", London, p. 22).

Stalin's intervention at this point as in similar cases in the economic field shows his continued awareness of the need to correct misplaced zeal and distortions of Marxism by a strong infusion of practical common sense. He aimed always at the fullest and freest development of Marxist ideas but he saw that their application required unceasing vigilance if they were not to degenerate into dogmatism.

Stalin's achievement is something greater than the building up and defending of the Soviet Union, greater even than the hope for peace and progress that he gave to the whole world. It is that his thought and his example is now embodied in the lives and thoughts of hundreds of millions of men, women and children : that it has become an indissoluble part of the great human tradition. However great the changes of the next few years, and they will be great changes which he worked for and would welcome, this remains. The ideas of Marx have found and can find no final resting place but Stalin has given them an illumination and an impetus that will never be forgotten. In the words which he quoted from the earliest of the Greek philosophers of change, Heraclitus :

"The world, the all in one, was not created by any god or any man but was, is and will ever be a living flame." **PAS**

## Theory versus Empiricism in Medicine

L. Crome

### Introduction

A highly interesting and important discussion has recently taken place in the Soviet Union. The issues concern the place of medicine in society, and among other sciences, and the orientation of medical practice and research along new and more promising lines. This discussion was brought to a climax in a joint session of the two academies of the Soviet Union : The Academy of Sciences of the U.S.S.R. and the Medical Academy in July of 1950. Decisions were taken at that session which are bound to have a profound influence on the development of Soviet medicine. It is therefore worth while to review some of the issues raised in that discussion. This can be done profitably by tracing their historical development.

### Rudolf Virchow

The science dealing with the theory and general laws of diseases is pathology and the founder of modern pathology was Rudolf Virchow. There was no theory of medicine before him, if one excludes such earlier phantasies as the theory of temperaments or of humours. The first microscopical studies of animal tissues were commenced in the early part of the nineteenth century and Virchow was first to use the microscope for examination of diseased tissues. He lived at a time of the remarkably rapid German industrial expansion. Machines and precision tools were coming into general and scientific use. It was a time of a phenomenal advance of science. Helmholtz, Ludwig, Johannes Muller, Dubois Raymond were some of Virchow's contemporary biologists.

The microscope revealed at once so many and such startling new facts about disease, that it seemed as if in the end, it would explain everything. The body was seen to be built of numerous contiguous cells varying to some extent in appearance from organ to organ and from tissue to tissue. These cells underwent visible reactive changes in many diseases and sometimes died. Certain cells in an organ might be affected while those next to it remained apparently intact. It looked for all the world as if the cells were both endowed with a certain

autonomy and also knit together into a kind of state like organization to form a living animal.

It will be remembered that the middle of the nineteenth century was a period of the emergence of the middle class as a political power in Europe, and of its struggle against the landowning aristocracy and the autocratic monarchy. The political slogan and ideal of the middle class was the democratic republic, in which every citizen would wield his individual economic power to the fullest advantage. Virchow was himself a participant in that struggle during its revolutionary phase in 1848 and again later when he fought against the undemocratic tendencies of Bismarck's policy. The similarity of that which Virchow conceived as a political ideal and the picture he saw under the microscope was more than mere coincidence. It is an illustration of one of the ways in which social ideology is reflected in science.

### Virchowian Theory

Virchow became convinced that the smallest unit of living matter was the cell. A complex organism was the sum of its component parts. Disease was to him a structural disturbance of cells. If an organ or tissue degenerated or died their function was lost to the patient. The patient was therefore an individual deprived of the function of the damaged cells.

Inasmuch as these views were based on what could be seen and, in a sense, measured, they became the first scientific theory of medicine. This theory was rapidly accepted by Virchow's contemporaries and is still generally regarded as valid.

It is worth repeating that Virchow was, by bourgeois standards, a progressive thinker. He was in many ways more progressive than his successors. He did not, for example, separate medicine from the social sciences and from politics. Thus he introduces the subject of the so-called interstitial encephalitis of the new-born (a term coined by him for a condition that is no longer accepted by modern pathologists) by saying that many unmarried mothers were being unjustly accused of infanticide and tried by German courts of justice, and that it is his purpose to show that death in such cases is caused by a disease acquired in intra-uterine life.

If Virchow's views are challenged to-day and found to be misleading and unscientific, it detracts in no way from his great achievements. Ideas progressive at one period are often reactionary at another.

Virchow's views had in fact hardly survived his own life. His philosophy insisted on such a degree of isolation of the organism and its component cells from the environment, that when the new science of microbiology came on the scene, Virchow was badly shaken. The story is told of Robert Koch demonstrating tubercle bacilli in a lung free from the familiar nodules which are typical of tuberculosis. Virchow banged his fist on the table, saying, "So long as I am alive, this is not tuberculosis." And he maintained this opposition to bacteriology to the end of his life.

The conception of a cell as the smallest and sole unit of living matter is idealist, static in nature and deprived of all historical perspective. It is not surprising therefore that Virchow was not in a position to accept the Darwinian theory of evolution.

### Virchow and Philosophy

Virchow's world of ideas, like that of most nineteenth century scientists, was rooted in the philosophy of Kant. The more pliable and scientific views of Hegel found hardly any reflection

in German pathology. (And it is German pathology which is, in the main, the foundation of present-day medicine). Hegel's ideas were not, however, lost to science. Though unacceptable to capitalist scientists, they were used and developed by Feuerbach, Marx, Engels and Lenin. In time they formed the basis for the modern philosophy of nature-dialectical materialism. Dialectical materialists do not and never could accept Virchow's views. The latter are too mechanistic to be true, and like all such mechanistic theories they invariably end in unwarranted idealism. The living organism is not a sum of its component parts, but an integral unit. The integration is a product not only of cellular contiguity, but also of humoral interaction, and in animals, even more, of nervous activity. Moreover, the individual does not exist in isolation from his environment, but is a being in dialectical unity with the environment. The higher the animal ascends in the evolutionary scale, the greater is the number and variety of environmental agents with which he can interact. It is the extent of this interaction which determines the freedom of the animal to move in, to shape and to mould his environment. And since this is so manifestly a function of the ever-expanding central nervous system, and more particularly of the cerebral cortex, it is reasonable to assign to the cortex the function of biological freedom.

### **Analytical Biology**

Virchow's views have had far reaching and dire consequences in all biological sciences. Bacteriology has been reduced to a fossilized system of cell groups. Desperate searches have continued for that elusive pattern of host-parasite relationship which still remains one of the tantalizing major mysteries to the orthodox pathologist. Pharmacologists began looking for "magic bullets." The result was that pharmaceuticals became one of the most prosperous industries in the world, yet no rational explanation has been given for the action of a single drug. Biologists started looking into more and more powerful microscopes. It became almost axiomatic that the smaller the thing one saw, the nearer one was to the absolute truth. Experimental workers, for lack of anything better, had to pin their faith in the Mill's canons—the logic of differences and of similarities. In a word, medicine became an analytical science.

### **The Limitations of Analysis**

What is the basic assumption of the analytical method? It is that one can abstract or isolate the event or phenomenon that one wishes to study whilst keeping everything else under control. But in reality one can only tear such a phenomenon out of its organic context by doing violence both to it and to the residue, in a way which makes control impossible.

A very common belief is that one can ascertain the function of an endocrine gland by removing it. Let us assume that it is intended to study the function of the pituitary. One takes two animals and hypophysectomizes one of them. One then hopes that the animals will remain equal in all respects but for the pituitary, and that the intact animal would therefore serve as a control. But it is obvious at once that the brain of the intact animal will be receiving impulses and hormonal stimuli from the pituitary, while the brain of the other animal will not. The two brains, and the animals of the gland will certainly alter the whole of the organism, but will fail to disclose the function of the gland.

Almost all experimental endocrinology is based on analytical work. It is not surprising therefore that it has harvested a vast array of hormone substitutes. The latest is A.C.T.H.

Over two centuries ago Descartes traced the seat of the soul to the pineal gland. Hans Selye has now moved it an inch and half forwards and downwards to the pituitary. Within recent years there has been a tendency in this country, and more so in the U.S.A., to "debunk" the cerebral cortex. This view is based largely on the experience with leucotomized patients, in whom much of the cortex is destroyed by the surgeon and who nevertheless retain a surprising amount of nervous function. Some of those patients even become in a way more manageable. A very distinguished American neurologist who recently visited this country thought that the cortex had been much overrated in the past. It seems that cortical activity is at discount in America to-day. (This would be amusing but for the recollection of another person in a different country who not so very long ago exhorted his countrymen to think with their blood). The limitations of the analytical method become very obvious when one tries to apply it to some well-known every-day phenomenon.

Supposing that one tries to ascertain the functions of a left half-back in a football team. The analyst will have him carried off the field and will then study the game of the remaining team. There will, in many cases, be a detectable change in the playing of the team, but will this reveal the role of the left half-back? If the team is reasonably good (and even the best of teams is not as closely knit a unit as a living organism!), it will not. At this point the statistician may step in and insist on a statistically significant series. He may demand that all half-backs be removed in one half of the teams in all three divisions of the League for twenty-one consecutive Saturdays. Once that is done, he will start looking for correlations. He may correlate it, for example, with goal averages, and there is little doubt that the half-back-deficient teams will score fewer goals. He will have therefore almost established that it is the half-back's function to score goals. If he is cautious, he will want an experiment at this stage to establish the fact that the left half-back can score goals. And this is easy enough.

The statistician may, if he likes, look for other correlations. Is there any correlation, for example, between the mean temperature of Saturday afternoons and the absence of the half-back? It may well be that after elaborate calculations he will reach the following conclusions: "There is no absolute evidence that it is the function of the left half-back to regulate the temperature of the English afternoon, but there is some indication that this is more likely to happen in Wales than in Lancashire."

This illustration is only absurd because it deals with a familiar example. Almost every biological paper contains papers based on similar methods, but dealing with much more complex and abstruse matters.

It is hardly necessary to say, that there are circumstances when such methods are useful. The removal of the left half-back would tell us a lot about the playing of a team without a left half-back, and statistical analysis would provide more precise data about this. But it will not tell us anything about the function of the left half-back in the complete team. In a reply to Belkin and Furer, who challenged Stalin's conclusions that language is that basis of thinking by citing the example of deaf-mutes, Stalin justly observed that the two phenomena are not comparable. What happens in man deprived of speech and hearing is no guide to the function of the latter in normal people.

### **Achievements of Orthodox Medicine**

The defenders of orthodox medicine claim that there can be little wrong with a science that gave us salvarasan, penicillin, aseptic surgery, a rising birth-rate and a longer life. But is this really surprising when one remembers all the regiments of scientists that explored the virgin soil of human biology in the last century. Especially if one remembers that amongst them were such men of genius as Pasteur, Metchnikoff, Ehrlich and Sherrington. Yet when the balance of the century is struck the debit side is never-ending. Can one overlook the fact that hardly any of the fundamental problems have been solved? Are we further in our understanding of such pressing phenomena as growth, tumours, senescence, infection? Is it not true that the major part in the elimination and prevention of diseases is a by-product of the class struggle, which has brought with it improved living standards and education, rather than the result of medical wisdom?

The cleavage between medical theory and practice is the shattering experience of every sensitive medical graduate as soon as he leaves his university. On the one hand are handsomely bound volumes entitled "System of Medicine," "System of Surgery" and a galaxy of other systems. On the other hand are the cursed patients who refuse to fit into any of the beautifully delineated chapters of any book.

### **Medicine and Other Sciences**

After a long and bitter opposition from those who claimed that medicine is an art, it is now generally conceded that it is a part of general biology. Yet, although scientists in Western countries like to pay lip-service to the principle of unity of science, they are not prepared to grant equal status to the so-called "humanities." Medicine in countries is not therefore part of the humanitarian science as well as of the physical ones. Most doctors would indeed be horrified at the suggestion that they could learn any medicine from statesmen or politicians, let alone that in order to be good doctors they must themselves be politicians. Yet if science is the collection and systematization of valid human experience, and the unity of science an indispensable condition for it, where is there a more potent source of experience than the management of human affairs and the organization of man in society? It is true that not every statesman is a Lenin, but then most scientists are not Isaac Newtons or Pavlovs either.

### **Virchow in Russia**

While Virchow's theory was generally accepted, it met with bitter and persistent opposition from some of the greatest biologists in Russia. The founder of Russian physiology, Sechenov, repudiated Virchow's views. Both Sechenov and, later Pavlov were convinced that empirical and analytical methods could be only of limited use, and Pavlov in his study of conditioned reflexes is finally succeeded in developing a new method of biological research. He wrote: "Yes, I am happy that together with Sechenov and a regiment of my dear collaborators we have won for the realm of physiological research the whole and indivisible animal organism in the place of a part of it, and this is completely our indisputably Russian achievement in the world of science and in general human thought." In the course of his remarkable scientific career, extending over more than half a century, Pavlov was able to show experimentally that the animal organism lives in constant unity the first place, mediates that unity. He and his pupils have shown that cells in all organs and that temporary connections, conditioned

reflexes, are continuously formed and extinguished, linking stimuli from the outside world with those derived from the internal organs. The separateness of the animal from his environment thus disappeared and with it also the artificial divisions of mind and body, and of structure and function. In other words, Pavlov has provided experimental evidence that the courageous deductions of the Marxist classics were as valid in biology as they were in other fields. The exceptional importance of Pavlov's work has, of course, been fully recognized by Lenin and by Stalin, who gave him and his successors full facilities for the extension and development of their investigations.

### **Development since 1917**

The building of Socialism after the 1917 Revolution placed enormous demands on Russian science. These were at first quantitative in nature. Scientists had to be trained rapidly and in tremendous numbers. The scale of the problem and the way in which it was solved can be seen from the fact that over 1,200,000 students attended Soviet universities and higher technical schools in 1950. Together with this gigantic expansion, a note of impatience and criticism of prevailing methods began to creep in. Pavlov's work was continued by himself and, after his death, by his numerous pupils. Amongst the latter was Orbeli, who contributed greatly to our knowledge of the autonomic nervous system. Much original work on the nervous system was done by Speransky. Speransky abandoned completely the Virchowian concepts of traditional medicine and attacked its fallacies with great passion. He became the foremost exponent of "nervism" in the Soviet Union in stressing the leading part played by the nervous system in pathology; moreover, he has even attempted the formulation of a new theory of medicine. At present this attempt appears to have been premature, but there can be no doubt that the impact of Speransky's work has been very considerable. Perhaps the most outstanding of all Pavlov's pupils has been Bykov. In a fascinating series of experiments, which have now been summarized by him in a monograph entitled *The Cortex and the Internal Organs*, Bykov has been able to show the extent of cortical participation and regulation of such organic states as diuresis, metabolism, hypertension, peristalsis, etc.

Gradually many scientists began to ask themselves whether it might not be better to make a clean break with traditional methods and to devote all their energy to research along Pavlovian lines. But there were also other workers, pathologists firmly entrenched in Virchowian positions and not willing to yield an inch. A stage was thus set for a full debate, but the war intervened and the debate was postponed.

### **Developments since the War**

The five years which have elapsed since the defeat of fascism in the Soviet Union have seen such an outburst of creative work as has never been known in the world before. The giant projects of Soviet industry and agriculture, which are transforming the country, changing its climate and which are designed to serve as the material foundation for the creation of communism, are now generally known. But the most significant and adventurous venture has been receiving much less publicity. It is the awareness and the responsibility for the emergence of a new type of man—the Soviet Man, free from that selfishness, duplicity and fear which are the hall marks of decadent capitalist society: a man fit to build and to live in a communist society. The Soviet people see the age-long dreams of mankind, the fairy tales of

their childhood, come alive before their eyes. All these great, historic events are, of course, inspiring in a world filled with gloom and dark insanity. But the reason why they are mentioned in this context is because they are a measure of the tasks that Soviet science had to face and to solve. There is no university or institute which does not actively try to solve some of these problems. All of them are on a scale greater than anything tackled by science before; many are entirely new to science. That is the reason why old methods become rapidly outworn. It is in the light of these events that the recent controversies in Soviet science and art must be evaluated; the campaign against formalism in art and music, the introduction of Michurinite methods in biology, the intervention of Stalin in the debate on linguistics and his call for a full, free and fearless discussion by all scientists regardless of the views of the so-called "authorities." The time had also come for a review of all the debatable issues in medicine. The discussion, which was at first confined to universities, spread until the Press and the public began to take an interest in it. The direct issues of the discussion were many and varied, since every branch of medicine was forced to re-examine many of their own special problems. The general points raised can, however, be summarized as follows.

#### **Need for a Theory**

Is there any need for a theory in pathology? It is obvious that scientists outside the Soviet Union are not generally aware of any such need. Although few research workers in the West would consciously subscribe to Virchowian doctrines, yet they are nevertheless using many postulates and assumptions based wholly or partially on those doctrines. In other respects they remain satisfied in proceeding along empirical lines. The position in the Soviet Union is different. The Russian people are very theory-conscious. They remember that it was in the struggle for a correct theory that the Communist Party was founded. The realization of the five-year plans is to them a living proof of the value of planning, which is in its turn based on sound theory. The history of Russian science from Lomonosov onwards is rich in examples of the formulation of correct theories. Lomonosov himself formulated the law of conservation of matter. Mendeleev, the great Russian chemist, searched for a theory of chemistry and his discovery of the periodic table of elements is surviving testimony to the value of such theory. Pavlov wrote of physiology: "The limits of physiological knowledge, its goal, is to express this infinitely complex relationship between the organism and the surrounding world in the form of an exact scientific formula." What is true of physiology is equally true of all other biological sciences, including pathology."

#### **Data for a Theory of Pathology**

The second issue arising out of the need for a theory is the store of material and the arrangement of accumulated facts essential in the formulation of such a theory. It is possible, and indeed likely, that such facts are known, but that pathologists are ignorant of the way of using them. Often one does not see facts unless one knows what to look for and where to look for it. It is here that Marxism and dialectical materialism can be of the greatest value. Marxism teaches that a sound theory is one which is indissolubly linked with practice, and one which is found and formulated in action. The shortcomings of present day medicine are seen in the ever widening gap between theory (such as it is) and practice. The obvious and most promising directions of advance in pathology must therefore be the investigation of

problems in practice, i.e. problems of clinical medicine, social medicine, treatment, physical training, organization of work and rest in factories and health resorts. Experimental work in laboratories is, of course, equally essential, but it will be used to the greatest advantage if linked with problems arising out of practical medicine.

#### **The use of Pavlovian Methods**

Many of the fields enumerated above have been already approached by Pavlov or his successors. Pavlov has, for example, maintained a live interest throughout his career in such practical problems of medicine as digestion, pharmacology, sleep, psychiatry, work. A fruitful beginning has already been made, and it is now essential to follow this up on a really large scale. Pavlov and his school have shown in countless experiments that the individual lives in dialectical unity with his environment, physical, biological and social. The system most directly concerned with the maintenance of the unity is the nervous system. Disease is an altered state of interaction between the individual and the environment, and since in man environment includes human society, disease is not only a physical and biological category, but also a social one. In view of the role of the nervous system in the life of the individual, it is reasonable to assume that its study in disease would prove rewarding. This is the practical meaning of "nervism" in pathology, and there is already ample evidence of the way in which many diseases can only be understood by reference to the part played in their causation, course and treatment by the nervous system.

#### **Repudiation of Virchow**

It is clear from all that has been said above that Virchowian theory is in no way compatible with the correct orientation of future research in medicine. The repudiation of Virchow does not, however, imply the abandonment of any of the useful facts and discoveries which have been found during the last century. It is, however, necessary to ascertain that the retained observations are facts and not phantasies. It is appropriate to recall the following remark of Lenin: "It would be a mistake to imagine that it is enough to adopt the communist formulas and conclusions of communist science without mastering the sum total of different branches of knowledge, the final outcome of which is communism. Communism becomes a mere phrase, an empty facade, and the communist a mere bluffer if he has not worked over in his consciousness the whole inheritance of human knowledge."

#### **The Joint Session of the Academies of Science**

The discussion on all the issues outlined in brief above eventually culminated in a public joint session of the Academy of Science of the U.S.S.R. and the Academy of Medical Science of the U.S.S.R., which was held in Moscow in July, 1950. The proceedings developed around the two opening reports by Academician K. Bykov and A.G. Ivanov-Smolensky. Bykov's report, which is available in English, forms an invaluable summary of the present philosophical position of medicine. Ivanov-Smolensky dealt more specifically with problems of neurophysiology and pathology. Most of the leading members of Soviet medicine took part in the ensuing debate, which was characterized by great sincerity and self-criticism. The debate was very fully reported in the Press, almost five whole numbers of *Pravda* being given over to the verbatim reports of the papers read at the Session. It is characteristic that at a time

when newspapers in the West were full of hysterical accounts of MacArthur's Korean campaign and the public in the U.S.A. were shrieking for the use of atom bombs and the murder of Koreans or Chinese, Soviet people were passionately debating the best ways of advancing the welfare of man and the conquest of disease.

### Resolution

The conference finally adopted a resolution which contains all the important points raised during the discussion, and which goes on to enunciate some practical measures for the development of Pavlovian theory in the Soviet Union. These include :

1. The two academies are instructed to prepare as quickly as possible organizational plans for the development of Pavlovian theory and its application to medicine, teaching, physical training and animal breeding.
2. The teaching programmes of universities and medical schools are to be revised immediately with a view to increasing the attention devoted to Pavlovian physiology.
3. At all universities and suitable institutes research is to be organised or extended on subjects to include the following :
  - (a) The physiology and pathology of higher nervous activity.
  - (b) The second signalling system and its relation to the primary signalling system.
  - (c) The trophic function of the nervous system.
  - (d) The cortico-visceral relationship.
  - (e) Experimental genetics of higher nervous activity.
  - (f) Pathological physiology, particularly the part played by the cortex in the re-establishment of lost visceral function.
4. Annual conferences are to be held by the academies to discuss and plan further research along Pavlovian lines.
5. Candidates for higher medical degrees are to be encouraged to take their doctorates in subjects related to Pavlovian physiology.
6. New textbooks on physiology and pathological physiology are to be written within the next two years.

### Conclusion

The new policy is not merely a reorientation of medical research, it is also a turning point on the road from empiricism to scientific medicine.

The experience of past discussions and planning in the Soviet Union leaves little doubt that the present debate will be followed by far-reaching and concerted action. It is safe to predict that the next few years will see a general advance of medicine in the Soviet Union and, perhaps, a real break-through might occur it is impossible to foretell, but the present objectives seem to be chiefly the practical problems of the prevention and treatment of disease.

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## Some Aspects of Stalin's 'Economic Problems'

Ronald L. Meex and George Houston<sup>1</sup>

The is dogmatic Marxism and creative Marxism. I stand by the latter.

J.V. Stalin, at the Sixth Congress  
of the Bolshevik Party, 1917

Henri Barbusse, writing in 1935, said of Stalin that since 1917 not a single year of his life had passed without his having done something which alone would have made any other man famous. And how much more true this is of Stalin's achievements from 1935 to the date of his death! To take the last decade only, of how many men can it be said that during a similar period they directed military operations comparable in scale and importance to the Battle of Stalingrad, inspired economic plans of the magnitude of those at present operating in the U.S.S.R., and produced theoretical works of such significance as *Concerning Marxism in Linguistics and Economic Problems of Socialism in the U.S.S.R.*?

It is fitting, in a way, that Stalin's last work should have been the *Economic Problems*, for this work possesses, perhaps to a greater degree than any other which he wrote, three characteristics which pervaded his life-work as a whole—a penetrating many-sidedness, a strong sense of realism, and a recognition of the essential unity of theory and practice. The *Economic Problems* is many different things at once. Looked at from one point of view, it is a blueprint of the transition of Soviet society from socialism to communism. From another point of view, it is an essay on economic policy, particularly in relation to agriculture. From still another, it is an attack on a certain 'dizziness with success' which had been manifesting itself in various ways in the U.S.S.R. since 1943. And finally, it is the most important contribution which has yet been made to the great task of distilling the experience of socialism in the U.S.S.R. into general theoretical propositions.

The work, as its title indicates, deals primarily with economic problems of socialism in the U.S.S.R. Its main emphasis is on the nature and effects of the economic relationship at present existing between the collective-farm sector and the state sector in the U.S.S.R., but it also deals with wider questions such as the general crisis of the world capitalist systems, the inevitability of wars between capitalist countries, and the basic economic laws of modern capitalism and socialism. On none of these questions does Stalin set out to provide us with 'all the answers'. What he does is rather to erect new sign-posts, to point out new paths of research, and to stimulate his readers to follow them. By following these new paths, we can provide Stalin with as fine a memorial as he could receive, or would have wished.

The present article will be confined to a consideration of two particular questions raised in the *Economic Problems*, both of which are of special interest to us in Britain. The first is

1. Both authors are jointly responsible for the first section of this article, but the first-named alone is responsible for the second section. (Manuscript-148)

the future of "commodity production" in a socialist society, and in a socialist Britain in particular; and the second is the basic economic law of modern capitalism. Our aim is to shake out some of the implications of Stalin's remarks on these questions, and to advance a little further along some of the paths of research which he indicates.

I. "Commodity Production" under Socialism in the U.S.S.R. and in Britain.

In the *Economic Problems*, Stalin characterises the economic relationship at present existing between the state sector of production and the collective-farm sector (i.e., roughly, between the town and the country) in the U.S.S.R. today as a "commodity relation". This bold characterisation is really the axis around which the major part of the work as a whole revolves.

Marx used the terms "commodity" and "commodity relation" in a rather special sense. A "commodity" is not simply a product, nor is it simply a product which is sold. "Only such products can become commodities with regard to each other", said Marx, "as result from different kinds of labour, each kind being carried on independently and for the account of private individuals".<sup>1</sup> A "commodity relation" exists between individual producers (or groups of producers) whose productive activities are carried on independently of one another and who satisfy their needs by mutually exchanging the "commodities" which they produce. The exchange of commodities began, according to Marx's account, on the boundaries of primitive communities, "at their points of contact with other similar communities, or with members of the latter".<sup>2</sup> Commodity production existed and developed under slavery and under feudalism, but it reached its highest form only in capitalist society, where almost every product (including labour power) is produced and sold as a commodity.

Marx and Engels seem to have believed that the end of capitalism would mean the more or less immediate end of commodity production. "The seizure of the means of production by society", said Engels, "puts an end to commodity production, and therewith to the domination of the product over the producer".<sup>3</sup> And Marx, speaking specifically of socialism (i.e. of the first phase of communism) said that "within the co-operative society based on common ownership of the means of production, the producers do not exchange their products".<sup>4</sup> Stalin, on the other hand, argues that a special kind of commodity production continues to exist (within certain limits) under socialism in the U.S.S.R. What is the reason for this discrepancy?

Fundamentally, the reason lies in the fact that Marx and Engels put forward their main theoretical generalisations at a time when it would have been impossible for them to foresee the rise of imperialism and the effect with it would have in altering the whole approach to the question of the proletarian revolution.<sup>5</sup> It is not true to say, as so many enemies of Marxism have said, that Marx and Engels failed to anticipate that the world revolution might begin in

1 *Capital*, Vol. I (Allen and Unwin edn.), p. 9.

2 *Ibid.*, p. 60.

3. *Anti-Duhring* (Martin Lawrence edn.), p. 311.

4. *Critique of the Gotha Programme* (Lawrence and Wishart edn.), p. 11.

5. Cf. Stalin, *Leninism*, Vol. I (English edn. of 1934). pp. 30 ff.

a backward peasant country: these are number of references in their writings which show that they were perfectly well aware of this possibility and even named Russia as the country in which the movement might begin.<sup>1</sup> But it is true to say, we think, that in making their main theoretical generalisations about socialism they assumed that the typical socialist revolution would occur in an advanced capitalist country—a country where capitalism had developed to such an extent, in agriculture as well as in manufacture, that it would be possible (owing to the absence of any "peasant problem") to expropriate all the means of production fairly soon after the assumption of power by the proletariat.

With the coming of imperialism, it was recognised by Lenin and Stalin that the revolution need not necessarily begin in countries where capitalism was more developed, but, rather, that it would begin in those countries which constituted "the weakest links in the chain of imperialism". The typical revolutions of our own times have occurred in countries with a substantial peasant population countries to which the original Marxist model is in some respects not completely applicable. In the U.S.S.R., for example, it was impossible for the victorious proletariat to expropriate all the means of production. Capitalism had concentrated the means of production in manufacture to a sufficient extent to enable them to be expropriated and made the property of society, but agriculture was still "divided up among numerous small and medium owner producers to such an extent as to make it impossible to consider the expropriation of these producers".<sup>2</sup> What, then, was to be done about agriculture? The policy adopted by Lenin and Stalin involved uniting the peasants in collective farms, and preserving for a certain period their right of disposition over their products. These collective farms, operating with means of production and land owned by the state, were early characterised by Lenin<sup>3</sup> and Stalin<sup>4</sup> as "socialist enterprises".

Was it true, then, that the coming of socialism in a country of this type would mean the more or less immediate end of commodity production? Stalin, in the *Economic Problems*, concludes that the productive activities of the collective farm sector and the state sector are sufficiently "independent" of one another for the economic relation between the two sectors to be capable of characterisation as a commodity relation. Although the means of production and production itself in agriculture are socialist property, they are not public property (in the full sense in which they are public property in manufacture), since the product of agriculture is not within the disposition of the state, and "the collective farms are unwilling to alienate their products except in the form of commodities".<sup>5</sup> This continued existence of a commodity relation between town and country means that the Marxian "law of value" continues to operate up to a point in this sphere, so that the relative prices of the consumer goods exchanged between town and country are to some extent determined by economic forces which are outside the control of the planning authorities. And this means, as Stalin puts it, that obstacles are created to "the full extension of government planning to the whole of the national economy, especially agriculture".<sup>6</sup> Thus the abolition of commodity production—i.e.,

1. Cf. Karl Marx, *Selected Works*, Vol. II (English edn.), pp. 667 ff.

2. Stalin, *Economic Problems*, p. 15 (Manuscript-145)

3. See, e.g., "On Co-operation", in *Selected Works*, Vol. IX (Lawrence and Wishart edn.), at p. 407.

4. *Leninism*, Vol. II pp. 266-70

5. *Economic Problems*, p. 19.

6. *Ibid.*, p. 76. (Manuscript-146)

the "raising of collective-farm properly to the level of public property"—is necessary not only in order to terminate the reign of the law of value, but also as a precondition of the transition to the second phase of communism in the U.S.S.R. Stalin advocates that the job should be done by gradually diverting the surplus collective-farm output from the market and including it in a sort of barter system between the state and the collective farms—an extension of the system of "products-exchange" which is already in operation in certain cases.

How far would this analysis apply to a socialist Britain? Would it be possible for the British proletariat, in the event of its assumption of power, to transform *all* the means of production—in agriculture as well as in manufacture—into public property, thus doing away entirely with commodity production and the operation of the law of value? In an extremely interesting passage, Stalin suggests that Britain is perhaps the only country in which this might in fact be possible. When Engels refers in *Anti-Duhring* to the seizure of all the means of production, Stalin says, he has in mind countries—

"where capitalism and the concentration of production have advanced far enough both in industry and in agriculture to permit the expropriation of *all* the means of production in the country and their conversion into public property. Engels, consequently, considers that in such countries, parallel with the socialization of all the means of production, commodity production should be put an end to. And that, of course, is correct.

"There was only one such country at the close of the last century, when *Anti-Duhring* was published—Britain. There the development of capitalism and the concentration of production both in industry and in agriculture had reached *such* a point that it would have been possible, in the event of the assumption of power by the proletariat, to convert all the country's means of production into public property and to put an end to commodity production.

"I leave aside in this instance the question of the importance of foreign trade to Britain and the vast part it plays in her national economy. I think that only after an investigation of this question can it be finally decided what would be the future of commodity production in Britain after the proletariat had assumed power and *all* the means of production had been nationalized.

"However, not only at the close of the last century, but today too, no country has attained such a degree of development of capitalism and concentration of production in agriculture as is to be observed in Britain. As to the other countries, not with standing the development of capitalism in the countryside, they still have a fairly numerous class of small and medium rural owner producers, whose future would have to be decided if the proletariat should assume power".<sup>1</sup>

It is clear that Stalin's remarks on British agriculture are mainly designed to show that Engels' treatment of the ending of commodity production is not and was not meant to be applicable to countries with a fairly numerous peasant class. At the same time, Stalin implies that once the working class came to power in Britain the means of production in agriculture as well as in manufacture could be converted into public property, and commodity production ended. (We shall leave aside the problem of foreign trade at present). Under these circumstances there would not be in a socialist Britain, as there are in the Soviet Union today, two basic production sectors, the state sector and the collective-farm sector; there would be "only

1. *Economic Problems*, pp. 14-15 (Manuscript-147)

one all-embracing production sector, with the right to dispose of all the consumer goods produced in the country".<sup>1</sup>

There are two distinct but closely related questions involved here. On the one hand there is the transition to a socialist agriculture in which the means of production are owned and disposed of by the state; on the other hand there is the establishment of a single production sector in which not only all the means of production but also all consumer goods are disposed of directly by a single state authority.

These questions are distinct from one another because the first transformation can take place (and has taken place in the U.S.S.R.) before the second development has become immediately practicable. They are closely related to one another because the nature and form of the transition to a socialist agriculture establishes the conditions within which the second change must take place.

If all the enterprises of a socialist agriculture were state farms, analogous to state factories in the sphere of manufacture, then the formation of a single production sector would coincide with the socialisation of agriculture, assuming that manufacture were already part of the state sector.<sup>2</sup> It is quite likely that state farms will be more important in a socialist Britain than in most other countries. This follows from the main difference between agriculture in Britain and elsewhere—the higher degree of capitalist development, reflected in the fact that the decisive rural class in Britain is the farm working class which makes up two thirds of the agricultural population. Farm workers are essentially part of the British proletariat; as such they stand for the social not the private appropriation of the product of their labour as well as for the social ownership of the production.

But, although state farming is likely to be very important in Britain, there are many parts of the country where some form of co-operative farming may turn out to be more suitable. Detailed consideration of these points does not concern us here. The view we wish to put forward is that regardless of the relative importance of state or co-operative farms in a socialist Britain, a single production sector could be established and commodity production ended<sup>3</sup> at the same time as agricultural production is socialised.

In the Soviet Union, Stalin points out, a single all-embracing production sector could be formed in the future not only by the (hardly likely) method of the state sector swallowing up the collective-farm sector, but by the "setting up of a single national economic body (comprising representatives of state industry and of the collective farms), with the right at first to keep account of all consumer product in the country, and eventually also to distribute it, by way, say, of products-exchange".<sup>4</sup> The method of products exchange is favoured by Stalin, we think, because it may prove to be more acceptable to the Soviet collective farmers than, say, a system of guaranteed prices. In countries where the members of co-operative farms

1. *Economic Problems*, p. 20

2. It is hardly necessary to stress that the socialisation of agriculture need not take place at the same time as the socialisation of manufacture. Indeed, due to the number of relatively small-scale units found even in British farming the transition to a socialist agriculture is likely to be a fairly slow process in comparison with manufacture.

3. Once again leaving aside the question of foreign trade. (Manuscript-148)

4. *Economic Problems*, p. 20 (Manuscript-149)

were prepared to alienate all their products not as commodities but by direct delivery to the state at guaranteed prices fixed by the state, then a single national economic body would be in a position to dispose of all consumption goods as well as all the means of production and (if foreign trade is ignored) commodity production would be ended.

There are a number of features of British agriculture which suggest that in a socialist Britain the product of the co-operative farms as well as that of the state farms could in fact be put at the disposal of the state in such a way. In the first place, many of the members of the co-operative farms would be former wage workers who, unlike peasants, have no desire as a class for the private appropriation of the product of their labour. In the second place, working farmers in Britain who would also join the co-operative farms may desire, as a class, to alienate their products as commodities, but, as a result of the development of capitalism in this country, their position vis-a-vis the market is significantly different from that of the peasants of other countries. In Britain to-day there is nothing quite like the peasant markets of Europe or the collective farm markets of the U.S.S.R. In war-time and up till recently almost all farm products in Britain had to be sold to the state at fixed prices. Even before the war many of these products were disposed of through large marketing boards or big distribution firms. In short, the high degree of capitalist development in British agriculture which Stalin mentions is paralleled by an extremely high degree of monopoly capitalism in the relations between agriculture and the rest of the economy. The ties between town and country in Britain are commodity relations dominated by monopoly capital. The state, by taking over the disposition of the product of agriculture, would be delivering a blow against monopoly capitalism, the main enemy of the working class and its allies, and such a step might well be acceptable to the majority of farm workers and working farmers in the countryside. If we are right, then, the formation of a single production sector in our country could be brought about at approximately the same time as the establishment of a socialist agriculture.

As Stalin indicates, however, the formation of a single production sector would not necessarily eliminate commodity production and the operation of the law of value from all spheres of productive activity in a socialist Britain. The question of foreign trade would have to be investigated before the future of commodity production could be finally decided. The point Stalin makes here is a fascinating one, with a significance reaching far beyond its present application to the rather special case of Britain. Commodity production in the Marxist sense, as we have seen, is associated with the existence of producing units which are economically "independent" of one another, and which satisfy their needs by mutually exchanging their products. But each individual country, whether capitalist or (under present conditions) socialist, is itself an "independent" producing unit in so far as it engages in foreign trade. The goods which a socialist Britain produced for exchange with other countries, therefore, would be commodities, and the economic relation between Britain and the countries with whom she traded would be essentially a commodity relation.

The problem of integrating the two "independent" production sectors in countries like the U.S.S.R., therefore, will have its international counterpart under world socialism in the problem of integrating the economics of the different "independent" national units which enter into trade with one another. Strictly speaking, commodity production under world socialism will disappear only when collective farm property is raised to the level of public property in all

countries like the U.S.S.R., and when, in addition, world production is controlled by a single international economic organisation. This has two important consequences. The first arises in relation to Stalin's important statement to the effect that the Marxian law concerning the role of the relations of production and the productive forces in the development of society continues to operate under socialism in the U.S.S.R., owing above all to the continued existence of collective-farm property (and therefore commodity circulation) in that country. It seems to follow that even after collective-farm property has been raised to the level of public property within each socialist country where it is necessary for this to be done, the Marxian law (in a different form) will continue to play an important part in the development of the relations between the "independent" socialist countries which exchange commodities with one another, if they have not by that time ceased to be "independent" owing to their integration into some sort of world community. The second consequence arises in relation to Stalin's Statement that only after the abolition of commodity production in the U.S.S.R. will the transition to communism in that country be possible. It follows, we think, that it will not be possible to achieve communism in any individual country to which foreign trade is important, or over the world as a whole, until world-wide economic integration has been achieved.

## II. The Basic Economic Law of Modern Capitalism

In the previous section, we have dealt with Stalin's amendment of the classical Marxist model of *socialism*—an amendment which was necessary, in the last analysis, owing to the fact that the classical model was formulated before the development of modern monopoly capitalism. In the present section, I shall deal with Stalin's amendment of the classical Marxist model of capitalism—an amendment which was necessary for precisely the same reason.

"The main features and requirements of the basic economic law of modern capitalism", says Stalin—

"might be formulated roughly in this way: the securing of the maximum capitalist profit through the exploitation, ruin and impoverishment of the majority of the population of the given country, through the enslavement and systematic robbery of the peoples of other countries, especially backward countries, and, lastly, through wars and militarization of the national economy, which are utilized for the obtaining of the highest profits".<sup>1</sup>

The concept of a single "basic economic law" which defines the *purpose* to which society subordinates social production under any given social formation and the *means* adopted for the achievement of this purpose, and which in this way can be said to determine the *essence* of the particular mode of production concerned,<sup>2</sup> seems to be a new one. What Stalin is doing, in effect, is to describe the essential difference between capitalism and socialism, not in terms of the familiar contrast between the very different degrees to which economic planning is carried on under each system, but rather in terms of the contrast between the aims which society sets social production in each case, Economic planning is neutral in itself, a mere means to an end.<sup>3</sup> "Planning" of a sort is carried on even under monopoly capitalism—but

1. *Economic Problems*, pp. 43-4.

2. *Ibid.*, pp. 82-7 and 42

3. *Ibid.*, p. 46

harilly (as under socialism) with the aim of securing "the maximum satisfaction of the constantly rising material and cultural requirements of the whole of society"! Stalin's definition of the two "basic economic laws", then, is an extremely effective device for laying bare what has now become the really essential difference between the two systems—a difference of *basic purpose*, which necessarily arises from the difference in their economic structures.

But it is of course very much more than this. In particular, Stalin's formulation of the basic economic law of modern capitalism serves to indicate the respects in which the classical Marxist model of capitalism needs amendment in the light of the rise of monopoly capitalism. This is the aspect of the law which I now wish to consider.

The basic economic law of capitalism, Stalin says, must "determine the essence of capitalist production and the principles of capitalist profit".<sup>2</sup> Is the law of the average rate of profit, then, the basic economic law of modern (i.e. monopoly) capitalism? No, answers Stalin—

"Modern capitalism, monopoly capitalism, cannot content itself with the average profit, which moreover has a tendency to decline, in view of the increasing organic composition of capital. It is not the average profit, but the maximum profit that modern monopoly capitalism demands, which it needs for more or less regular extended reproduction".<sup>3</sup>

In saying this, Stalin does not of course mean to deny that there is a certain sense in which the great majority of capitalists have always sought to secure the "maximum profit". It is obviously a fact that they have always tried to get *as much profit as possible in any given situation*. What Stalin is doing is to put forward a new concept—the concept of "maximum profit"—in order to draw a distinction, first, between the rate of profit which was "sufficient for capitalist development"<sup>4</sup> in the days before the rise of monopoly capitalism and the rate which is sufficient today; and, second, between the methods normally employed by the capitalists in the two periods to secure the profit necessary for this development.

In Britain in Marx's day, the degree of competition between capitalists was such that it was still possible to assume that capital was normally withdrawn from spheres with low rates of profit and transferred to others which promised a higher rate. "By means of this incessant emigration and immigration", said Marx, "in one word, by its distribution among the various spheres in accord with a rise of the rate of profit here, and its fall there, it brings about such a proportion of supply to demand that the average profit in the various spheres of production becomes the same".<sup>5</sup> What happened in essence during this process, according to Marx's analysis, was that the pool of surplus value created by the general body of wage labourers was parcelled out among the capitalists in accordance with the amount of capital possessed by each.<sup>6</sup> The "average profit" which resulted from this competitive division of the pool was

1. *Ibid.*, p. 45 (Mnscript-151)

2. *Economic Problems*, p. 42

3. *Ibid.*, p. 43

4. *Ibid.*, p. 44

5. *Capital*, Vol. III (Kerr ed.), p. 230 (Mnscript-152)

6. The best short account of this analysis will be found in the *Selected Correspondence of Marx and Engels*, pp. 129-33. I am abstracting here (and elsewhere in this article) from the fact that incomes other than profit—e.g. interest and rent—are paid out of this surplus value.

sufficient, generally speaking, for "more or less regular extended reproduction"—i.e., enough profit was available for "ploughing back" to secure an adequate rate of accumulation. Thus it was not necessary for the capitalists to adopt any "abnormal" or "extra economic" methods of securing profits: it was enough to employ the "normal", "economic" method of exploiting wage-labour and accepting the share of surplus value which fell to one's lot as a result of the competitive process.

Under modern conditions, however, as Stalin points out, the "average profit" in this sense becomes insufficient to satisfy the needs of capitalist development. This is due partly to the fact that the average profit "has a tendency to decline, in view of the increasing organic composition of capital". But in the main it is due to the fact that the great monopolistic combines of our own times require a much larger rate of profit in order to carry on "more or less regular extended reproduction" and to protect themselves against the fierce competition of rival monopolists. The "average profit" is no longer sufficient. The monopoly capitalist therefore begins to seek what Stalin calls the *maximum* profit, as distinct from the average profit. In other words, he begins to use what were formerly regarded as "abnormal" or "extra-economic" methods in order to increase his profit. And this means, as Stalin puts it, that the law of surplus value put forward by Marx must be "made more concrete and developed further in adaptation to the conditions of monopoly capitalism".<sup>1</sup>

Marx's account of the origin of surplus value was aimed in particular against those "vulgar" economists who still continued to argue that profit was obtained by "buying cheap and selling dear". In the early days of capitalist accumulation, when production was still largely in the hands of workers owning their own means of production, it was indeed true, as Engels pointed out, that merchant capital "could only make its profit ... out of the foreign buyers of domestic products, or the domestic buyers of foreign products".<sup>2</sup> Profit was in fact "profit upon alienation", and was conceived as such by economists. In later times, however, when production came to be organised more and more on a capitalist basis, and competition increased in both foreign and internal trade, the "profit upon alienation" concept became less and less plausible. Profit then gradually came to be conceived, not as something which was created in the sphere of exchange, but as something which was created in the sphere of production and merely *realised* in exchange. The source of profit began to be seen in the capacity of labourers employed on a capitalist basis to produce in a day's work more than enough to keep them going for a day. Profit became essentially the fruit of the exploitation of these wage-labourers by the capitalists. Marx's theory of surplus value represented the culmination of this line of thought. In Marx's account, the workers in each branch of production produce a surplus value over and above the value of their labour power. But the surplus value produced in each branch does not necessarily remain their. The competition of capitals ensures, as I have already mentioned, that the total surplus value produced in the whole of the economy is in effect pooled and divided up between the capitalists in proportion to the amount of capital owned by each.<sup>3</sup> Thus each capitalist, under competitive conditions, receives only the average rate of profit, the level of which is determined in such a way that the

1. *Economic Problems*, p. 43

2. *Engels on 'Capital'*, p. 110 (Mnscript-153)

3. *Sec.*, e.g., *Capital*. Vol. III, pp. 186-7

total profit received by all the capitalists taken together is roughly equal to the total surplus value created by all the workers.

This analysis was put forward, of course, only as a first approximation to reality. Marx was well aware of the fact that individual capitalists under certain circumstances could obtain more than this average rate of profit. For example, suppose that a manufacturer—

“exploits a new invention before it has become general, undersells his competitors and yet sells his commodities above their individual values, that is to say, he exploits the specifically higher productive power of the labour employed by him as surplus value”.<sup>1</sup>

Such a manufacturer will secure what Marx calls a “surplus profit” or “super-profit”. And similarly—

“Capitals invested in foreign trade are in a position to yield a higher rate of profit, because, in the first place, they come in competition with commodities produced in other countries with lesser facilities of production, so that an advanced country is enabled to sell its goods above their value even when it sells them cheaper than the competing countries. To the extent that the labour of the advanced countries is here exploited as a labour of a higher specific weight, the rate of profit rises, because labour which has not been paid as being of a higher quality is sold as such.”<sup>2</sup>

Then again—

“Capitals invested in colonies, etc., may yield a higher rate of profit for the simple reason that the rate of profit is higher there on account of the backward development, and for the added reason, that slaves, coolies, etc., permit a better exploitation of labour”.<sup>3</sup>

And finally, the equalisation of the surplus value into average profit may meet “with obstacles “in the shape of artificial or natural monopolies, particularly of monopoly in land, so that a monopoly price would be possible”. But this monopoly price, Marx argued—

“would merely transfer a portion of the profit of the other producers of commodities to the commodities with a monopoly price. A local disturbance in the distribution of the surplus-value among the various spheres of production would take place indirectly, but they would leave the boundaries of the surplusvalue itself unaltered”.<sup>4</sup>

The important thing to notice about these exceptions to the law of the average rate of profit is that they are still analysed by Marx within the broad framework of the general law of surplus value. The above-average profits are regarded as the result either of an increased exploitation of labour or of an increased share in the pool of surplus value. But when monopoly capitalism develops, when certain methods of securing profits which were formerly regarded as “abnormal” begin to become “normal”, and in particular when the state machine is subjugated to the monopolies—then, as Stalin puts it, the law of surplus value becomes “too general a law”.<sup>5</sup> For the “maximum profit” which the monopolists now begin to seek, and which now becomes “the motor of monopoly capitalism”.<sup>6</sup> differs from the old “average profit”

1. *Ibid.*, p. 279, and cf. pp. 310-11 (Manuscript-154)

2. *Capital*, Vol. III, pp. 278-9

3. *Ibid.*, p. 279

4. *Ibid.*, p. 1,003.

5. *Economic Problems*, p. 43.

6. *Ibid.*, p. 44. (Manuscript-155)

not only quantitatively but also (in part) qualitatively. A “hiatus” (to us Stalin’s term) arises, which has to be filled.

There are two new factors in particular which help to bring about this change. In the first place, it seems to me that there are now many cases in which a part of the excess profit received by certain monopoly capitalists should properly be regarded as something like the old “profit upon alienation”. For example, one of the methods which monopoly capitalism adopts to secure maximum profits, as Stalin notes, is “the conversion of a number of independent countries into dependent countries”.<sup>1</sup> When this happens, the monopoly capitalists usually secure for themselves certain special privileges and advantages in their trade with the dependent countries. In some cases it may be reasonable enough to say that a portion of the abnormal profits of the monopoly capitalists which result is gained at the expense of capitalists in the dependent countries. In other cases, however, particularly when the commodities which the monopoly capitalists export to the dependent countries are not already being produced there in any significant quantity, it seems more plausible to say that a part of the excess profit is in fact obtained as a result of the “systematic robbery” of the *general body of consumers* in the dependent countries.

In the second place, as Jean Duret has recently pointed out in an important article in *Cahiers Internationaux*, “the economic policy imposed by big monopoly capital leads not only to a redistribution of *income* (to the advantage of big capital and to the detriment of the masses of the people) but also to a redistribution of wealth and a real expropriation of certain strata of society by monopoly capital and the incorporation in its profits of the wealth so expropriated”.<sup>2</sup> Take, for example, the case of a state embarking upon large-scale rearmament policy. In order to finance its expenditure on armaments—which will of course greatly increase the profits of a large section of monopoly capital—the state will probably resort both to open or disguised inflation and to increased taxation. These measures will bring about, first, a redistribution of *income*: prices will probably rise faster than wages, so that the rate of surplus value (in the original Marxist sense) rises, and the pressure of taxes on the working people will produce what Duret calls “a supplementary transfer of income”.<sup>3</sup> But the measures may also bring about, second, some redistribution of wealth: inflation tends to depreciate the real value of securities yielding a fixed money income, so that small rentiers and similar sections of the community are in effect partially expropriated, and the increased taxes may be sufficiently heavy to force certain hard-pressed groups to dispose of some of their assets. Thus, as Duret says, “the maximum profit of monopoly capitalism includes the product of the expropriation and spoliation of the other strata of society. This is an element of which it is always necessary to take account, for example in order to calculate the approximate rate of surplus value. If this is not done, the results will be seriously distorted”.<sup>4</sup>

It appears, then, that the original Marxian law of surplus value must indeed be “made more concrete and developed further in adaptation to the conditions of monopoly capitalism”, since the source of the “maximum profit” which monopoly capitalism now requires is no longer solely the exploitation of the workers employed by the capitalists, but rather, as Stalin puts it, “the exploitation, ruin and impoverishment of the majority of the population of the given country”, etc. Stalin’s formulation of “the main features and requirements of the basic

1. *Economic Problems*, p. 44

2. *Cahiers Internationaux*, No. 43, February 1953, p. 37 (my emphases).

3. *Ibid.*, p. 38

4. *Ibid.* (Manuscript-156)

economic law of modern capitalism'' is an attempt to bring all the different sources of profit together under one and the same heading.

Stalin does not deal in any detail with the further changes in the Marxian model which this new way of looking at profit may necessitate. There are two problems in particular, I think, which Marxists will have to solve. First, what happens to Marx's law of the falling tendency of the rate of profit? In Marx's original formulation of this law, the above average profits of colonial investment, etc., appear among the ''counteracting causes'' which may ''thwart and annul'' the depressant effects upon the average rate of profit of the increasing organic composition of capital.<sup>1</sup> Stalin's analysis seems to me to suggest that profits of this type have now attained a status higher than that of mere ''counteracting causes'', and that it may no longer be possible to lay down any general law concerning secular movements in ''the'' rate of profit. Even if this is so, however, it remains true that any studies of the causes of the behaviour of the rate of profit in the past, or any estimates of its probable behaviour in the future, must still be largely based upon a consideration of the factors indicated by Marx-supplemented, where necessary, by a consideration of those indicated by Stalin. The exploitation of wage labour still remains, after all, the chief source of ''maximum profit'', just as Marx's analysis of the labour-capital relationship still remains the essence and inner form'' of capitalist production.

Second, what happens to Marx's conclusion that the prices of *individual* commodities under capitalism are ultimately governed by the relative quantities of labour required to produce them? This conclusion was based on two assumptions, both reasonable enough at the time when Marx wrote-that competition was more or less free, and that the only significant source of profit was the exploitation of the workers. On these assumptions, it could be shown that the ''production prices'' at which individual commodities tended to sell, even though they generally diverged from values, were *ultimately* determined by the relative quantities of labour required to produce the commodities.<sup>2</sup> Even when the first assumption was dropped, and the existence of monopoly prices higher than production prices and values was recognised, it could still be said that ''the limits imposed by the value of commodities would not be abolished thereby''<sup>3</sup>-provided that the second assumption remained valid. But if both assumptions are dropped, as they appear to be in Stalin's analysis, then ''the limits imposed by the value of commodities'' are in fact abolished. The substitution of maximum for average profit implies, I think, that the law of value no longer operates to determine individual prices in the way that it did in Marx's day. This does not mean, of course, that the law of value no longer operates at all under modern capitalism. ''Wherever commodities and commodity production exist'', says Stalin, ''there the law of value must also exist''.<sup>4</sup> All that it means is that it operates in a rather different way. And the science of political economy, as Marx pointed out, ''consists precisely in working out how the law of value operates''<sup>5</sup> in various forms of society where commodity production exists. Here, is a challenge to British Marxists. Marx and Engels showed very clearly how the law of value operated in pre-capitalist social formations, and in the era of pre-monopoly capitalism. Stalin has gone a long way towards elucidating the manner in which it operates under socialism. It is up to us to throw further light on the manner in which it operates in the period of monopoly capitalism.

1. *Capital*, Vol. III, pp. 278-9 and 272

2. *Ibid.*, Chapter 9 (Manuscript-157)

3. *Capital*, Vol. III, p. 1,003

4. *Economic Problems*, p. 23

5. *Letters to Kugelmann*, p. 74 (Manuscript-158)

## The Commitment of the Intellectual

Paul A. Baran

What is an intellectual? The most obvious answer would seem to be : a person working with his intellect, relying for his livelihood (or if he need not worry about such things, for the gratification of his interests) on his brain rather than on his brawn. Yet simple and straightforward as it is, this definition would be generally considered to be quite inadequate. Fitting everyone who is not engaged in physical labor, it clearly does not jibe with the common understanding of the term ''intellectual.'' Indeed, the emergence of expressions such as ''long-haired professor'' and ''egghead'' suggests that somewhere in the public consciousness there exists a different notion encompassing a certain category of people who constitute a narrower stratum than those ''working with their brains.''

This is not merely a terminological quibble. The existence of these two different concepts rather reflects an actual social condition, the understanding of which can take us a long way towards a better appreciation of the place and the function of the intellectual in society. For the first definition, broad and it is, applies accurately to a large group of people forming an important part of society : individuals working with their minds rather than with their muscles, living off their wits rather than off their hands. Let us call these people *intellect workers*. They are businessmen and physicians, corporate executives and purveyors of ''culture,'' stockbrokers and university professors. There is nothing invidious in this aggregation, no more than there is in the notion ''all Americans.'' or ''all people who smoke a pipe.'' The steady proliferation of that group of intellect workers represents one of the most spectacular results of historical development thus far. It reflects a crucially important aspect of the social division of labour, beginning with the early crystallization of a professional clergy and reaching its acme under advanced capitalism-the separation of mental from manual activity, of white collar from blue collar.

Both the causes and the consequences of this separation are complex and all-pervasive. Rendered possible by, and contributing mightily to, the continual expansion of productivity, this separation has become at the same time one of the principal facets of the progressive disintegration of the individual, of what Marx referred to as the ''alienation of man from himself.'' This alienation expresses itself not only in the crippling and distorting effect of this separation on the harmonious development and growth of the individual-an effect which is not mitigated but underscored by the intellect workers' occasional partaking of ''culture''-but also in the radical polarization of society into two exclusive and all but unrelating camps. This polarization of society into two exclusive and all but unrelating camps. This polarization cutting across the antagonism between social classes, generates a thick ideological fog obscuring the genuine challenges confronting society, and creates issues as false and schisms as destructive as those resulting from racial prejudice or religious superstition. For all intellect workers have one obvious interest in common : not to be reduced to the more onerous, less remunerative, and-since they are the ones who set the norms of respectability-less

respected natural labor. Driven by this interest, they tend to hypostatize their work and the complexity of the skills required for it, to inflate the importance of formal education, of academic degrees, etc. And in seeking to protect their position, they pitch themselves against manual labor, identify themselves with the intellect workers who comprise the ruling class, and side with the social order which has given rise to their status and which has created and protected their privileges.

Thus under capitalism the intellect worker is typically the faithful servant, the agent, the functionary, and the spokesman of the capitalist system. Typically, he takes the existing order of things for granted and questions the prevailing state of affairs solely within the limited area of his immediate preoccupation. This preoccupation is with the job in hand. He may not be satisfied with the level of costs in the factory which he owns, manages, or in which he is employed, and may seek to lower them. He may be given the task of "selling" public opinion on a new soap or a new political candidate, and he will carefully, scientifically attend to his assignment. He may not be content with the current knowledge of the structure of the atom, and hence will devote prodigious energies and talent to finding ways and means of expanding it. One might be tempted to call him a *technician*, but this could easily be misunderstood. As a president of a corporation, he may make weighty decisions affecting the national economy as well as the jobs and lives of thousands of people. As an important government official, he may greatly influence the course of world affairs. And as a head of a large foundation or scientific organization, he may determine the direction and the methods of research of a large number of scientists over a long period of time. All this is clearly not what is meant by the term "technician," which usually denotes individuals whose task it is not to formulate policies but to carry them out, not to set goals but to work out the means of their realization, not to provide the great design but to look after the small details. And yet the designation "technician" comes closer to encompassing the nature of what I mean by "intellect worker" than the customary use of the word would suggest.

For, to repeat, the purpose of the intellect worker's work and thought is the particular job in hand. It is the rationalization, mastery, and manipulation of whatever branch of reality he is immediately concerned with. In this regard he differs little, if at all, from the manual worker who molds metal sheets, assembles parts of an engine, or lays bricks in constructing a wall. Putting it in negative terms, the intellect worker *as such* is not addressing himself to the meaning of his work, its significance, its place within the entire framework of social activity. In still other words, he is not concerned with the relation of the segment of human endeavor within which he happens to operate to other segments and to the totality of the historical process. His "natural" motto is to mind his own business, and, if he is conscientious and ambitious, to be as efficient and as successful at it as possible. For the rest, let others too, attend to their business, whatever it may be. Accustomed to think in terms of training, experience, and competence, the intellect worker regards dealing with problems of that totality as one speciality among many. This is to him the "field" of philosophers, religious functionaries, or politicians, even as "culture" or "values" are the business of poets, artists, and sages.

Not that every intellect worker explicitly formulates and consciously holds this view. Yet he has, one might almost say, an instinctive affinity to theories incorporating and rationalizing it. One of them is Adam Smith's time-honored and well known concept of the world in which

everyone by cultivating his own garden contributes most to the flourishing of the gardens of all. In the light of this philosophy, the concern with the whole moves out of the center of the individual's preoccupation, and affects him, if at all, merely marginally, that is to say in his capacity as a citizen. And the strength and influence of this philosophy derive from the very important truth that it conveys : that under capitalism the whole confronts the individual as an overpowering objectified process irrationally propelled by obscure forces which he is incapable of comprehending, let alone of influencing.

The other theory which reflects the condition and satisfies the requirements of the intellect worker is the notion of the separation of means from ends, of the divorce between science and technology on the one side and the formulation of goals and values on the other. This position, the ancestry of which is at least as distinguished as that of Adam Smith, has been aptly referred to by C.P. Snow as a "way to contract out" In Snow's words, those "who want to contract out say we produce the tools. We stop there. It is for you, the rest of the world, the politicians, to say how the tools are used. The tools may be used for purposes which most of us would regard as bad. If so, we are sorry. But as scientists, this is no concern of ours." And what applies to scientists applies with equal force to all other intellect workers.

Needless to say, "contracting out" leads in practice to the same attitude as the Smithian "minding one's own business"; it is indeed nothing but another name for it. And this attitude remains essentially unaffected by the now generally felt disposition to put one's faith in the government rather than in the principles of *laissez faire*, to substitute for God's invisible hand the more obvious if by no means necessarily more beneficent hand of the capitalist state. The result is the same : the concern with the whole becomes irrelevant to the individual, and by leaving this concern to others he *eo ipso* accepts the existing structure of the whole as a datum and subscribes to the prevailing criteria of rationality, to the dominant values, and to the socially enforced yardsticks of efficiency, achievement, and success.

Now I submit that it is in the relation to the issues presented by the *entire* historical process that we must seek the decisive watershed separating intellect workers from intellectuals.\* For what marks the intellectual and distinguishes him from the intellect workers and indeed from all others is that his concern with the entire historical process is not a tangential interest but permeates his thought and significantly affects his work. To be sure, this does not imply that the intellectual in his daily activity is engaged in the study of all of historical development. This would be a manifest impossibility. But what it does mean is that the intellectual is systematically seeking to relate whatever specific area he may be working in to other aspects of human existence. Indeed, it is precisely this effort to interconnect things which, to intellect workers operating within the framework of capitalist institutions and steeped in bourgeois ideology and culture, necessarily appear to lie in strictly separate compartments of society's knowledge and society's labor—it is this effort to interconnect which constitutes one of the intellectual's outstanding characteristics. And it is likewise this effort which identifies one of the intellectual's principal functions in society : to serve as a symbol and as a

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\* To avoid a possible misunderstanding : intellect workers can be (and sometimes are) intellectuals, and intellectuals are frequently intellect workers. I say frequently, because many an industrial worker, artisan, or farmer can be (and in some historical situations often has been) an intellectual without being an intellect worker.

reminder of the fundamental fact that the seemingly autonomous, disparate, and disjointed morsels of social existence under capitalism—literature, art, politics, the economic order, science, the cultural and psychic condition of people—can all be understood (and influenced) only if they are clearly visualized as parts of the comprehensive totality of the historical process.

This principle "the truth is the whole"—to use an expression of Hegel—carries with it, in turn, the inescapable necessity of refusing to accept as ... a datum or to treat as immune from analysis, any single part of the whole. Whether the investigation relates to unemployment in one country, to backwardness and squalor in another, to the state of education now, or to the development of science at some other time, no set of conditions prevailing in society can be taken for granted, none can be considered to be "extraterritorial." And it is wholly inadmissible to refrain from laying bare the complex relations between whatever phenomenon happens to be at issue and what is unquestionable the central core of the historical process: the dynamics and evolution of the social order itself.

Even more important is to realize the implications of the practice, studiously cultivated by bourgeois ideologists, of regarding the so-called "values" held by people as lying outside the purview of scientific scrutiny. For these "values" and "ethical judgments" which to the intellect workers are untouchable data, do not drop from heaven. They themselves constitute important aspects and results of the historical process and need not merely be taken cognizance of but must be examined with regard to their origin and to the part which they play in historical development. In fact, the de-fetishization of "values," "ethical judgments," and the like, the identification of the social, economic, psychic causes of their emergence, change, and disappearance, as well as the uncovering of the specific interests which they serve at any particular time, represent the greatest single contribution that an intellectual can make to the cause of human advancement.

And this raises a further issue. Interpreting their function as the application of the most efficient means to the attainment of some stipulated ends, the intellect workers take an agnostic view of the ends themselves. In their capacities as specialists, managers, and technicians, they believe they have nothing to do with the formulation of goals; nor do they feel qualified to express a preference for one goal over another. As mentioned above, they admit that they may have some predilections as citizens, with their predilections counting for no more and no less than those of other citizens. But as scientists, experts, scholars, they wish to refrain from endorsing one or another of these "value judgments." It should be perfectly clear that such abdication amounts in practice to the endorsement of the *status quo*, to lending a helping hand to those who are seeking to obstruct any change of the existing order of things in favor of a better one. It is this "ethical neutrality" which has led many an economist, sociologist, and anthropologist to declare that *qua* scientist he cannot express any opinion on whether it would be better or worse for the people of underdeveloped countries to enter the road to economic growth; and it is in the name of the same "ethical neutrality" that eminent scientists have been devoting their energies and talents to the invention and perfection of means of bacteriological warfare.

But it could be objected at this point that I am begging the question, that the issue arises precisely because of the impossibility of deducing what is good or what is bad or what contributes to, rather than militates against, human welfare. Whatever force there may be in

this argument, it is actually beside the point. It can be readily granted that there is no possibility of arriving at a judgment on what is good or bad for human advancement which would be *absolutely* valid regardless of time and space. But such an *absolute*, universally applicable judgement is what might be called a false target, and the insistence on its indispensability is an aspect of a reactionary ideology. The truth is that what constitutes an opportunity for human progress, for improvement in the lot of men and also what is conducive or inimical to its realization, differs in the course of history from one period to the next, and from one part of the world to another. The questions with regard to which judgments are required have never been *abstract*, speculative questions concerning "good" or "bad" in general; they have always been *concrete* problems placed on the agenda of society by the tensions, contradictions, and changing constellations of the historical process. And at no time has there been a possibility or, for that matter, a necessity to arrive at *absolutely* valid solutions; at all times there is a challenge to use mankind's accumulated wisdom, knowledge, and experience to attain as close as possible an *approximation* to what constitutes the best solution under the prevailing conditions.

But if we are to follow the "contractors out," the "ethically neutral" minders of their own business, then we would bar precisely that stratum in society which has (or ought to have) the largest knowledge, the most comprehensive education, and the greatest possibility for exploring and assimilating historical experience, from providing society with such humane orientation and such intelligent guidance as may be obtainable at every concrete junction on its historical journey. If, as an eminent economist recently remarked, "all possible opinions count, no more and no less than my own," then what is, indeed, the contribution which scientists and intellect workers of all kinds are willing and able to make to society's welfare? The answer, that it is the "know-how" for the realization of whatever objectives society may elect, is completely unsatisfactory. For it should be obvious that society's "elections" do not come about by miracles, that society is guided into some "elections" by the ideology generated by the social order existing at any given time, and is cajoled, frightened, and forced into other "elections" by the interests which are in a position to do the cajoling, the frightening and the forcing. The intellect worker's withdrawal from seeking to influence the outcome of those "elections" is far from leaving a vacuum in the area of "value" formation. It merely abandons this vital field to charlatans, crooks, and others whose intentions and designs are everything but humanitarian.

It may be well to mention one further argument which is advanced by some of the most consistent "ethical neutralists." They observe, sometimes haltingly and blushing, that after all it is by no means establishable on grounds of evidence and logic that there is any virtue in being humanitarian. Why shouldn't some people starve if their suffering enables others to enjoy affluence, freedom, and happiness? Why should one seek a better life for the masses instead of taking good care of one's own interests? Why should one worry about the proverbial "milk for the Hottentots," if such worry causes discomfort or inconvenience to oneself? Isn't the humanitarian position in itself a "value judgment" for which there is no logical base? Some thirty years ago I was asked these questions in a public meeting by a Nazi student leader (who eventually became a prominent SS man and functionary of the Gestapo), and the best answer that I could think of then is still the best answer I can think of now: a meaningful discussion of human affairs can only be conducted with humans; one wastes

one's time talking to beasts about matters related to people.

This is the issue on which the intellectual cannot compromise. Disagreements, arguments, and bitter struggles are unavoidable and, indeed, indispensable to ascertain the nature, and the means to the realization, of conditions necessary for the health, development, and happiness of man. But the adherence to humanism, the insistence on the principle that the quest for human advancement requires no scientific or logical justification, constitutes what might be called the axiomatic foundation of all meaningful intellectual effort, an axiomatic foundation without the acceptance of which an individual can neither consider himself nor be thought of as an intellectual.

Although the writings of C.P. Snow leave no doubt that he would unreservedly accept this point of departure, it would seem that he believes the commitment of the intellectual to be essentially reducible to the obligation to speak the truth. (It is worth noting here that there is also no basis in evidence or logic for the proposition that truth should be preferred to lies!) In fact, the principal reason for his admiration for scientists is their devotion to truth. Scientists—he says in the previously referred to address—“want to find what is *there*. Without that desire, there is no science. It is the driving force of the whole activity. It compels the scientist to have an overriding respect for truth, every stretch of the way. That is, if you're going to find what is *there*, you mustn't deceive yourself or anyone else. You mustn't lie to yourself. At the crudest level, you mustn't fake your experiments.” (Italics in the original.) And yet, while this injunction goes a long way towards formulating the basic commitment of the intellectual, it falls short of taking care of the entire problem. For the problem is not merely whether truth is being told but also what *constitutes* truth in any given case as well as *about* what it is being told and *about* what it is being withheld. Even in the area of the natural sciences these are important issues, and there are powerful forces at work shunting the energies and abilities of scientists in certain directions and impeding in sterilizing the results of their work in others. When it comes to matters related to the structure and dynamics of society, the problem assumes central significance. For a true statement about a social fact can (and most likely will) turn into a lie if the fact referred to is torn out of the social whole of which it forms an integral part, if the fact is isolated from the historical process in which it is imbedded. Thus in this domain what constitutes truth is frequently (and can be safely) sought and said about things that do not matter, with the insistence on the pursuit and pronouncement of that kind of truth becoming a powerful ideological weapon of the defenders of the *status quo*. On the other hand, telling the truth about that *does* matter, seeking the truth about the whole, and uncovering the social and historical causes and interconnections of the different parts of the whole is decried as unscientific and speculative and is punished by professional discrimination, social ostracism, and outright intimidation.

The desire to tell the truth is therefore only one condition for being an intellectual. The other is courage, readiness to carry on rational inquiry to wherever it may lead, to undertake “ruthless criticism of everything that exists, ruthless in the sense that the criticism will not shrink either from its own conclusions or from conflict with the powers that be.” (Marx) An intellectual is thus in essence a *social critic*, a person whose concern is to identify, to analyze, and in this way to help overcome the obstacles barring the way to the attainment of a better, more humane, and more rational social. As such he becomes the conscience of society and the spokesman of such progressive forces as it contains in any given period of

history. And as such he is inevitably considered a “troublemaker” and a “nuisance” by the ruling class seeking to preserve the *status quo*, as well as by the intellect workers in its service who accuse the intellectual of being utopian or metaphysical at best, subversive or seditious at weast.

The more reactionary a ruling class, the more obvious it becomes that the social order over which it presides has turned into an impediment to human liberation, the more is its ideology taken over by anti-intellectualism, irrationalism, and superstition. And by the same token, the more difficult it becomes for the intellectual to withstand the social pressures brought upon him, to avoid surrendering to the ruling ideology and succumbing to the intellect workers' comfortable and lucrative conformity. Under such conditions it becomes a matter of supreme importance and urgency to insist on the function and to stress the commitment of the intellectual. For it is under such conditions that it falls to his lot, both as a responsibility and as a privilege, to save from extinction the tradition of humanism, reason, and progress that constitutes our most valuable inheritance from the entire history of mankind.

It may be said that I am identifying being an intellectual with being a hero, that it is unreasonable to demand from people that they should withstand all the pressures of vested interests and brave all the dangers to their individual well-being for the sake of human advancement. I agree that it would be unreasonable to *demand* it. Nor do I. From history we know of many individuals who have been able even in its darkest ages and under the most trying conditions to transcend their private, selfish interests and to subordinate them to the interests of society as a whole. It always took much courage, much integrity, and much ability. All that can be hoped for now is that our country too will produce its “quota” of men and women who will defend the honor of the *intellectual* against all the fury of dominant interests and against all the assaults of agnosticism, obscurantism, and inhumanity.

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## Critiquing Timpanaro's Approach to Materialism

Ramkrishna Bhattacharya

In two earlier essays (*Psyche and Society*, 11:2 December 2013 and 12:1 May 2014) attempts have been made to show how flawed Sebastiano Timpanaro's approach is in holding that materialism is associated with both pessimism and hedonism. It has been demonstrated that his views fly in the face of what Marx and Engels themselves said in this regard. They denounced both asceticism and self-enjoyment (originally formulated by Aristippus of Cyrene in the fifth century BCE) categorically (Engels, *The Peasant War in Germany* pp.63-64; Marx-Engels, *German Ideology* pp.469ff). Right from their early works down to the mature ones, Marx and Engels, not unlike the Buddha, apparently preferred to follow a middle course between both self-denial and sensual indulgence. As to the preoccupation with death, which Timpanaro derived from the poetry of Giacomo Leopardi and Giosuè Carducci, I have contrasted Engels' clear declaration, 'Living means dying' (*DN* p.295).

Timpanaro's conception of materialism in some other and vital respects, however, is fundamentally sound. He has very rightly defended Engels's claim to be the co-founder of Marxism, as opposed to two types of 'anti-Engelsian sentiment' (*On Materialism* pp. 74-75). He has judged Engels's role in the formation of Marxism as a self-complete worldview and assigns more credit to Engels than to Marx for achieving this end:

'Even more than by Marx – though evidently not in dissent from him – the need for the construction of a materialism which was not purely socio-economic, but also 'natural' was felt by Engels, and this was a great merit of his. The impulse to deepen their materialism in this way came not only from the general philosophical and the scientific climate of the second half of the nineteenth century, but more specifically from the radical change which Darwinism introduced in the natural sciences, by its definitive demonstration (against the concept of nature accepted by Hegel and materialists of Hegelian derivation such as Moleschott) of the historicity of nature.' (pp. 41-42)

This is not to say that Engels was more interested in the dialectics of nature than in human affairs. Timpanaro considers Engels's *The Origin of the Family, Private Property, and the State* a 'splendid book' (p. 42). Yet Timpanaro observes quite pertinently:

'What was in Engels a complex position, and *odi et amo* [hate and love] towards the materialism of the natural sciences, indubitably became an outright hostility in the Western Marxists of the twentieth century, even among those who might seem most immune to any subjectivist regression. In this hostility, correct theses and sophisms have been deeply intertwined'. (p. 43).<sup>1</sup> Nor does Timpanaro spare postmodern gurus like Jacques Lacan. Quite bluntly he declares: 'The first "journalist" in this pejorative sense go by the names of [Claude] Lévi-Strauss and, even worse, [Michel] Foucault, and, worst still, [Jacques] Lacan' (p. 177).<sup>2</sup>

Timpanaro's controversy with Lucio Colletti is equally illuminating. Time and again Timpanaro asserts that materialism 'is not just 'realism'; it also implies recognition of the physical nature of the subject, and of the physical nature of his activities traditionally regarded as 'spiritual' (p. 80). His irony is devastating: 'But if materialism amounted merely to the recognition of a reality external to the subject, then Plato, Saint Thomas [Aquinas] and all their followers would also be materialists' (p. 80). Moreover Timpanaro is never dogmatic. While defending Ludwig Feuerbach, he does not forget to add:

'Although a Jakob Moleschott [1822-93] or a Ludwig Büchner [1824-99] was inferior to Feuerbach from a purely philosophic standpoint, nevertheless their materialism had many more links to the natural sciences than had Feuerbach's so-called materialism (in reality, more of a naturalistic humanism). The former were not satisfied simply with stepping the primacy of the sensuous over the conceptual and with turning theology into anthropology. They also searched for an explanation of sensuousness – as well as intelligence and morality – in biological terms' (p. 81).

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Examples of Timpanaro's sound philosophical foundation can be multiplied. It is amply evidenced in his evaluation of the structuralists and their successors. But instead of hammering on

the same issue, let me pose two queries:

1. Why does Timpanaro go utterly wrong when he deals with pessimism (death) and hedonism?
2. Is blending poetry with philosophy a valid proposition?

Regarding the first query I would humbly submit that Timpanaro was so thoroughly enamoured of two Italian poets, Giosuè Carducci and Giacomo Leopardi, that he lost his sense of direction. There have been other poets, from Sophocles to Shakespeare, who have dealt with 'the human condition,' the issue of the inevitability of death (also of the ultimate destruction of the universe when the sun will cease to shine). But instead of turning pessimistic because of this ultimate destiny, they simply accepted the inevitable with stoic calm.

Let us hear Sophocles first. The chorus in *Antigone* (lines 332-40) laments:

Wonders are many on earth, and the greatest of these  
Is man, who rides the ocean and takes his way  
Through the deeps, through wind-swept valleys of perilous seas  
That surge and sway.

He is master of ageless Earth, to his own will bending  
The immortal mother of gods by the sweat of his brow,  
As year succeeds to year, with toil unending  
Of mule and plough.

... ..

There is nothing beyond his power. His subtlety  
Meeteth all chance, all danger conquereth.  
For every yield he hath found its remedy,  
Save only death.

O wondrous subtlety of man, that draws  
To good or evil ways! Great honour is given  
And power to him who upholdeth his country's laws  
And the justice of heaven. (Trans. E.F. Watling pp. 135-36)

Hamlet in a philosophic mood almost echoes Sophocles:

What a piece of work is a man! How noble in reason! how infinite in faculty! in form, in moving, how express and admirable! in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals! And yet, to me, what is this quintessence of dust? (*Hamlet* 2.2.293-298, pp. 325-26).

In spite of such sad reflections on mortality, neither Sophocles nor Shakespeare turned out to be pessimistic. They seem to have accepted the obvious lesson, what cannot be cured must be endured, and in the face of all misfortune, asserted the value of wisdom and a rational approach to living. The last choric song in *Antigone* says:

Of happiness the crown  
 And chiefest path  
 Is wisdom, and to hold  
 The gods in awe.  
 This is the law  
 That, seeing the stricken heart  
 Of pride brought down,  
 We learn when we are old. (Trans. E.F. Watling p. 162)

This is what Shakespeare too realized. It enabled him to say, through Edgar (addressing his father, Gloucester):

Men must endure  
 Their going hence, even as their coming hither;  
 Ripeness is all. (*King Lear* (conflated text) 5.2.9-11, p. 773)

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Timpanaro took up the challenge of defending materialism at a time when Marxism was not only alive and thriving but also the focus of intense debate. In Italy, articles, essays, and their rejoinders were regularly coming out in numbers. In spite of the great divide caused by the differences between the Communist Party of the Soviet Union (CPSU) and the Communist Party of China (CPC) – in addition to the older quarrel between the ideologues of the official communist parties and the Trotskyists – the enemies outside the world communist movement and those inside it were engaged in destroying the roots of materialism itself. The Marxists, whether belonging to any party or not, were trying hard to defend materialism in the face of their onslaught. Over and above the immaterialist philosophers, there were the Trojan Horses who denied the very concept of materialism itself.

In the mid-1960s there was an open attempt to dilute the rational kernel of Marxism (see Klugmann ed., *passim*). This was all occasioned by a sudden spurt in opening and pursuing a dialogue between the Marxists and the Christians. Roger Garaudy, then a central committee member of the French Communist Party, produced a small book, *From Anathema to Dialogue* (1966) which won the praise of the Communist Party of Great Britain (CPGB) ideologues. John Lewis and others opened a dialogue with the British theologians and padres in the party journal *Marxism Today* (1966-67). Appeals were issued to all devoted Christians, including priests to join the party (for details see Klugmann ed. pp. 88, 106-07 and *passim*.)

The revisionists in the now-defunct CPGB, for example, claimed that it was totally un-Marxist for the Marxists to declare themselves as atheists, and they would be happy to reject the word materialism itself. John Lewis, once the doyen of the philosophers belonging to the CPGB declared in 1966: '[P]eople who take the modern view don't call themselves materialists. They don't call themselves anything' (Klugmann ed. p.106)! He went to the extent of saying, quite wrongly of course: 'Marx never called himself a materialist, not even a dialectical materialist' (Klugmann ed. p.107). A look at the Postface (Afterword) to the second German edition of *Capital* could have disabused him of this absurd notion. Marx clearly declared: '[in my *Contribution to the Critique of Political Economy*] I have discussed the *materialist basis of my method*'

(Moscow ed. p. 27, Penguin ed. p.100. Emphasis added). In the same Postface Marx mentions: 'My dialectical method is not only different from the Hegelian, but is its direct opposite. To Hegel, the life-process of the human brain, i.e., the process of thinking, which, under the name of "the Idea," he even transforms into an independent subject, is the demiurgos [=creator] 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 mind, and translated into forms of thought' (Moscow ed. p.29, Penguin ed. p.102). This is a mere rehash of what Marx and Engels had declared earlier in the introductory part of *The German Ideology*:

'In direct contrast to German philosophy which descends from heaven to earth, here we ascend from earth to heaven. That is to say, we do not set out from what men say, imagine, conceive, nor from men as narrated, thought of, imagined, conceived, in order to arrive at men in the flesh. We set out from real, active men, and on the basis of their real life-process we demonstrate the development of the ideological reflexes and echoes of this life-process' (pp.37-38).

In the same Postface Marx had made a distinction between the mystified form of the Hegelian dialectic and the rational form of his own (Moscow ed. p.29, Penguin ed. p.103).

In spite of all this Lewis would insist that Marx never called himself a materialist, or even a dialectical materialist. If one goes by the letter alone, he or she would have to admit that Lewis is right. But if one goes by the spirit and interprets the statements made in the Postface (Afterword), he or she cannot deny that Marx calls his method *both dialectical and materialist*. It may be added that it was Engels who first used the phrase 'materialist dialectics' in his *Ludwig Feuerbach and the End of Classical German Philosophy* (1886) (*On Religion* p.248). It was Engels again who first used the label, 'historical materialist' in the Preface to the English Edition of the Pamphlet, *Socialism: Utopian and Scientific* (1892) (1976 p.427), which is originally a part of *Anti-Dühring*. Georgi Plekhanov at the Appendix of *Fundamental Problems of Marxism* (1908) changed the order of the two words. He wrote: 'The philosophy of Marx and Engels is not only a *materialist philosophy*, it is *dialectical materialism!*' (1974 p.89. Italics in the original).

John Lewis, in another essay, 'The Unknown Marx,' helped popularize another misconception that the name, dialectical materialism, was coined by Georgi Plekhanov (1856-1918). Actually, Joseph Dietzgen (1828-88) was the first to use this name in the 1870s, when both Marx and Engels were alive (MacLellan p.152n2).<sup>4</sup>

It is amusing to remember that 'John Lewis, B. Sc., Ph. D.' had written a booklet, *Marxism and Modern Idealism* in 1944 (brought out by the same publisher), in which he sought to refute both idealism and mechanistic materialism, as well as expose 'modern irrationalism' (Lewis 1944, pp.9-34). Revisionism in his later days mellowed him so much that he was prepared to give up materialism altogether.

Those who were not prepared to go to that extent thought it prudent not to use the word materialism because of its association with Marx and hence with the communist movement. They revived the word 'naturalism' and coined a new word, 'physicalism'. Maybe it was a matter of caution when Dale Riepe wrote his doctoral dissertation entitled *The Naturalistic Tradition in Indian Thought* (later printed by the University of Washington Press in 1961). Probably it was a way of evading the Cold War psychosis that prevailed in the USA in the 1950s. But it is difficult to explain why Professor Pesi Rustam Masani, Department of Mathematics and Physics, Uni-

versity of Pittsburgh, USA,<sup>5</sup> found fault with Paul Sweezy, editor of *Monthly Review*, for using the term 'materialism' in his *Four Lectures on Marxism* (1981). Masani in fact chided Sweezy for not writing 'realism' in place of 'materialism'. Masani (August 31, 1982) said:

'If I ask what my red ball point pen is, I run into several answers. It is an aggregate of chemical molecules, it is an electromagnetic field, it is a spatio-temporal region (a class of events) with a particular curvature tensor. Each answer has to be thought of as a particular coding of the pen. The pen itself is what is common to all these codings—what Russell calls relation-structure, and what nowadays is described as a group-invariant. This is [a] highly mathematical and therefore ideal concept. So if we really want to ontologize, we would all have to be called "idealist" or "realist-idealist."'

Sweezy replied (September 29, 1982) with his usual suavity:

'If I understand you there are no serious disagreements between us on an epistemological level. The question of what your red ball point pen is may be infinitely complicated, but what it is not is relatively simple: it *is not* an idea originating in someone's head. In fact it existed, at least *in potentia*, long before there were any heads. As I read Marx and Engels, this defines the dividing line between materialism and idealism. If you prefer the term "realism" to "materialism," I have no objection except that it may tend to obscure the interpretation of the Marxist position.' (Reproduced in J. B. Foster in the *Monthly Review* website)

In face of such subterfuges, evasions and downright escapism, Timpanaro did hold the banner of militant materialism high, never swaying from the fundamental principles of Marxism-Leninism. What then went wrong when he wished to incorporate both pessimism and hedonism in materialism itself?

One point is amply clear. The two Italian poets he cherished, Carducci and Leopardi, seem to have exerted a rather unhealthy influence on Timpanaro. However fond one may be of this poet or the other, a poet's vision should not be adopted uncritically by any reader, Marxist or non- or anti-Marxist, as a substitute for his or her philosophy of life. Timpanaro seems to have thought that materialism, although adequate as a philosophy of nature, is not so as a philosophy of life. Instead of trying to formulate his views on life and death on the basis of what Engels himself has said in *DN* (p. 295), Timpanaro succumbed to an odd despair not expected of such a sound Marxist philosopher. Neither Vladimir Mayakovsky nor Bertolt Brecht, neither Pablo Neruda nor Paul Eluard or even Salvatore Quasimodo, could be of assistance to him when he thought of the inevitability of old age and decay, and the vacuum in the mind to be filled up by his reading and his association with comrades and friends. Carducci and Leopardi, for whatever reason, were chosen by him to fill in the gap in his mind with such fantasies as 'materialist pessimism' and perhaps as a corollary, the desire to drink life to the lees (in the words of Tennyson's Ulysses) in order to compensate, however meagrely, for the despair engendered by the depressing fact of mortality.

As it has been shown above, great poets like Sophocles and Shakespeare did not bother too much either about death or about hedonism. By choosing Carducci and Leopardi, two lesser poets, as his philosopher-cum-guide, Timpanaro was sadly deceived by a view of living and dying that is totally alien to the spirit of materialism in general and of dialectical materialism in

particular. The very dialectics of life is its inseparable relation to death; life cannot but be associated with its negation, death, and it is the unity and struggle of these two opposites that determine the course of human civilization. Death of an individual is as much a law of nature as the birth of another. Hegel as well as Goethe saw the death of the tragic hero against the backdrop of the inherent problem of the relationship between the species and the individual. Lukàcs sums up Hegel's view as follows: 'The evolution of the species is non-tragic, but it unfolds through countless objectively necessary individual tragedies' (1968 p.180).<sup>6</sup> In other words, the species renews its life with the death of every individual hero, and this is how the whole course of human history goes on achieving greater and yet greater limits of liberation.

This, I think, answers the question concerning philosophy vis-à-vis poetry. Plato believed that 'there is from old a quarrel between philosophy and poetry' (*The Republic* 10.607b, p.832). I do not share this view. I do not think that poets and philosophers are by nature opposed to each other (as Plato said in *Laws* 967c, p.1512). Poetry and philosophy, I believe, are perfectly compatible. At the same time, I think that not all poetry can be beneficial to materialist philosophy. Some poets and their works foster materialism while some others, irrationalism. The materialist understanding of life and death, and of enjoyment and self-denial, is upheld by all great poetry. It is a pity that in spite of being an excellent classical scholar of repute, Timpanaro, by falling prey to the charms of Carducci's and Leopardi's poetry rather than of Sophocles' and Shakespeare's, seems to have imbibed the negative and philosophically objectionable sides of the two Italian poets (admittedly they had their positive sides too). This uncritical acceptance of both the sides of Carducci's and Leopardi's poetry made Timpanaro deviate from Marx-Engels's clear-cut views on death and hedonism, and consequently lapse into immaterialism.

It is also to be regretted that Timpanaro had not read the *Mahabharata*, the great epic of India. It tells of a terrible eighteen-day long battle between the kin for the rightful inheritance of a kingdom. The conflict of interest divided the whole of India into two warring factions and millions of lives were lost. At the end of the war the old, blind king Dhritarashtra felt inconsolable at the loss of his hundred sons (Book 11, *The Book of the Women* (Striparvan), chapter 1). Vidura, his stepbrother, counsellor, and constant companion told him quietly:

'Everything massed together ends in destruction; everything that gets high is sure to fall down. Union is certain to end in separation; life is sure to end in death' (11.2.3. Trans. K.M. Ganguly).

Or we may recall the story of Kisa Gotami as found in Buddhist canonical texts, particularly the *Poems of the Elder Nuns* (*Theri-gatha*). Kisa Gotami lost her only son and was overcome by grief. Following the advice of a neighbour she went to the Buddha and appealed to him to bring her son back to life. The Buddha asked her to bring mustard seeds from houses where no death had occurred. The bereaved mother went from door to door but found no such house.

'So by the evening, she still had no mustard seed for medicine for her child. However, something important had happened. As a result of sharing her sorrow with so many other people who also had lost a loved one, she found that her own sorrow was now different. No longer did she feel agonized and almost mad with grief. Instead, although she still felt sorrow at the loss of her child, she also knew that there were many others in the town who had also experienced a similar loss and the same terrible sorrow. Suddenly she realized that sorrow and death

are part of how life is, not only for her but for everyone. So she took her dead child to the cemetery outside the town and, sadly, lovingly, buried his little body.

Then she went back to the Buddha, who asked, "Well, Gotami, have you got the mustard seed for the medicine?" Gotami answered, "Thank you, O Wise One. No, I have not brought any mustard seed, but your medicine of the mustard seed has already worked, as you knew it would. Because I now see that my own sorrow is part of the sorrow of all people, and that the death of our loved ones is part of the pattern of life for everyone. That is the medicine I needed, and that is what you have helped me to understand."

And from that time onwards, Gotami became one of the wisest and most respected followers of the Buddha. She became famous for her sad and beautiful poetry on the sufferings of women, caused by the pains of giving birth, the difficulties of marriage, the deaths of husbands and, particularly, the deaths of children.<sup>7</sup>

This is where the classics, whether of the east or the west, excel over all minor poets of the modern era.

Coming down to more recent times we may recall a Bangla song by Rabindranath Thakur (Tagore, 1861-1941) :

There is grief, there is death, pangs of separation hurt.  
 Yet peace, joy and the illimitable arise.  
 Yet constantly flows life, the sun and the moon and the stars smile,  
 Yet spring comes to the grove in hues wonderful.  
 Waves disappear, waves rise,  
 Flowers fall, flowers bloom,  
 There is no decay, there is no end, nor is there an iota of indigence -  
 The mind begs place at the feet of that total.

(*Gitanita*, p.108. Trans. A. K. Dasgupta)

To answer the question raised above, we may conclude then: poetry need not be excluded from the domain of philosophy, but a materialist, when reading poetry, must not suspend his critical faculty. Even while enjoying the merits of a poem he or she should not emotionally accept what is intellectually inadmissible to him. A sharp distinction is to be maintained between the merits of a poem *qua* poem (qualities of diction, metre, imagery, etc.) and the ideas it seeks to convey. The wheat and the chaff are not to be treated as one inseparable whole: if one admits the former, one need not admit the latter too. To use an old Indian expression, one has to be like the duck, which is said to reject the water and take only the milk.

## Notes

1. Timpanaro most probably had Georg Lukàcs (1885-1971), the Hungarian Marxist philosopher, in mind. Lukàcs never believed in the dialectics of nature: Marxism to him was exclusively a social philosophy, confined to the world of humans. Referring to the famous passage concerning the categories as 'but forms of being, conditions of existence' Lukacs said:

'It is of the first importance to realise that the method [of dialectics] is limited here to the realms of history and society. The misunderstandings that arise from Engels' account of

dialectics can in the main be put down to the fact that Engels - following Hegel's mistaken lead - extended the method to apply also to nature. However, the crucial determinants of dialectics - the interaction of subject and object, the unity of theory and practice, the historical changes in the reality underlying the categories at the root cause of changes in thought, etc. - are absent from our knowledge of nature' (1971 p.24 n6).

Such views are current among different groups of Western Marxists. They tend to delimit the scope of Marxism to the study of human society, more specifically the capitalist society, and implicitly deny its claim as a *Weltanschauung* (worldview), a claim staked by Lenin in his seminal essay, 'The Three Sources and the Three Component Parts of Marxism'. Paul Sweezy went to the extent of declaring:

'If one examines this Preface [to Marx's *A Contribution to the Critique of Political Economy*, 1859] as a whole and in context, rather than simply lifting out a few statements that are formulated in general terms, it is unmistakably clear that what Marx was talking about was capitalism, not history in general... I believe that *as applied to capitalism* the schema of the Preface can yield useful insights and understanding' (pp.21-22. Emphasis in the original).

2. In a footnote Timpanaro adds: 'Among the three, Lacan is the one whose knowledge of linguistics is most imprecise - indeed, at times, utterly erroneous..' (p.177 n98). In his *Freudian Slip* Timpanaro further observes:

'I must confess that I am incurably committed to the view that in Lacan's writings charlatanism and exhibitionism largely prevail over any ideas of a comprehensible, even if debatable nature; behind the smoke-screen, it seems to me, there is nothing of substance; and it is difficult to think of a pioneer in the encounter between psychoanalysis and linguistics who has more frequently demonstrated such an erroneous and confused knowledge of the latter whether structural or not' (p. 58n).

3. Commentators have explained 'ripeness' as follows: 'To await the destined time is the most important thing, as fruit falls only when ripe (playing on Gloucester's "rot," line 8); Readiness for death is our only duty (compare *Hamlet*: 5.2.160, "The readiness is all")'. *Norton Shakespeare*, p.773 n3.

4. In 'The Unknown Marx' Lewis said that Marxists might identify themselves as evolutionary naturalists or accidental evolutionists; better still, if they did not identify themselves in any way at all (1968, p. 67). Since I had no access to the original, I read the Bangla translation of his essay, published in a Bangla journal, *Ekshan*, in 1968.

5. Pesi Rustam Masani (1919-99) was the brother of Manocher ('Minoo') Rustom Masani (1905-98), one of the scions of a well-known Parsi family of Bombay (now Mumbai, state capital of Maharashtra). After a brief stint with the Communist Party of India, Minoo became a leader of the Congress Socialist Party, but later re-appeared as a vocal mouthpiece of Swatantra Party, an extreme right-wing outfit set up by C.R. Gopalachari in 1959. The party, while it lasted, continued to preach anti-communist and pro-imperialist doctrines. It did not survive long; after some spectacular victories in three parliamentary elections (1962, 1967 and 1971), the party, following the death of its founder, Rajaji in 1972, was wound up in 1974, presumably due to the lack of financial support from the corporate sector, landlords and such like sources.

6. Lukàcs reiterates this view on another occasion: 'Goethe is equally far from the false profundity and one-sided pessimism of the nineteenth century (which is sometimes labelled "pantragic") as he is from the banal optimism of the liberal literature and philosophy of the same period which denies the necessity of the tragic in general or at best seeks to subjectify it' (1968, p.180).
7. Retold by Richard Winter, Cambridge Buddhist Centre. See <http://mindfulnessmethod.wordpress.com/articles/kisa-gotami/>. This is based on Ms Rhys Davids and Norman, pp.88-89, a translation of the *Theri-gatha* and the commentary by Dhammapala (sixth century æ) who claimed he was following traditional interpretations.

The *Theri-gatha* is a part of the *Collection of Little Texts (Khuddaka Nikaya)*, the collection of short books in the *Sutta Pitaka*. The work is divided into 16 chapters containing 73 poems. It is the earliest known collection of women's literature in the world.

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PAS

## Marcuse, Freud and Revolution

Dr. Dhirendranath Gangopadhyay

To one part of American intellectuals and neoleft the name 'Herbert Marcuse' is pronounced like Marx, Lenin, Mao, Guavera as a symbol of revolution and modern thoughts. In the (19)50's Eric Fromm tried to synthesise Marxism and Freudism for attainment of Socialism. Marxists are intimately aware of his writings. His way of thinkings had influenced many youths. But he emphasised much more regarding change of mindset than change of society and as he had emphasised the change of individual mind so he could not make any permanent impression on the minds of the youths. Herbert Marcuse is an ex-colleague of Eric Fromm.

They have assembled with some other persons for sociological researches at Frankfort of Germany. The crisis of capitalism in between the period of the two World Wars were their subject of research. They have considered the crisis of capitalism is the crisis of human civilization and have tried to make publicity of it. They are disturbed at the helplessness of the essence of individual as well as for the spread of alienation. They have heard the loud lamentation of the people due to heartless torture of capitalism. They have realised that man has lost all control of his fate, of his society and become a puppet of this productive forces. In this condition they feel it is necessary to create a new image of man. So to enquire the causes and solution of this crisis they took the assistance of anthropology, psychology and Freudian psychoanalysis. And to make out a solution they have come to the conclusion that the fundamental causes of this crisis are embeded in the mind of individual man, not in the society.

But we cannot say that they have totally neglected economics and politics. Still they are doing research with the development of technology, commodity-dependent civilisation,

society of abundance etc. In this article we shall try to acknowledge one most important aspect of best known member of Frankfurt School, Herbert Marcuse who is much more popular as ideal revolutionary theoretician to the American students and youths. This part is concerned with the psychology of Freudian libido-suppression and sexuality theory. Before coming to the analysis regarding relationship of libido-suppression and revolution we shall try for a brief account of Marcuse and to submit it to our readers. In this way it may be a bit easy to realise the problems of 'Eros and Civilisation'.

Herbert Marcuse is German, student of philosophy. After Hitler's insurgency he came to America. He was forced to quit Germany due to his scathing criticism of Nazi's philosophy. He was connected to defence department at the time of second World War. Presently he is attached as professor to California University. Few days ago nobody knew him except with his academic circle. Now he is famous in the world for apologist of neoleft philosophy and student-revolution. His widely read popular book is 'One Dimensional Man'.

In his initial writings (1936-38) Marcuse is very much inspired by the concepts of neo-Hegelians. Though the critics are of the opinion that there is much difference of Marcuse's theory with those imperialist neo-Hegelian. He wants to consider Marxism as the simple and spontaneous outcome of Hegelian philosophy. Marcuse has neglected the other sources of Marxism. In his opinion Engels and Lenin had not enriched Marxism. On the contrary they had added some extra-Marxist elements. Marcuse has accepted the Marxian economy on distribution of commodity but he has rejected Marx's theory of production-process. Initially Marcuse has Hegelised Marx and then purified it with Freudian theory. According to Marcuse there is transcendence of philosophy in Hegel, Marx has cross the limit of philosophy and discovered the rules of social changes.

Marx's dialectics failed to be completely materialist beyond Hegel. Marx has not grasped exactly the reality and revolution. So uptill now all the endeavours of revolutions have failed. There is the tendency to surrender and of being tortured of individual psyche. As the vestige of this tendency has not been removed so it is creating all sorts of 'negation' in revolution. Marx has not wished to cut off all relationship with the past so the revolution has turned into counterrevolution and there is newer forms of exploitation in the society.

It is not possible to perform a true revolution keeping intact the production system i.e. the tools and machineries, technology, techniques, division of labour, state etc. Without tearing all connections with the past it is not possible to make any process of emancipation. Marcuse does not think that this working class would be able anytime to destroy this connections with the past. They are the part and parcel of this institution of old production-system. This Frankfurt philosophers have no relation with the worker's movement or working class so they do not know them either, so they do not want to make any comment or introduction with this revolutionary drama.

It is needless to deny that fascism-opposition mindset of Marcuse is artificial. Scathing criticism of Fromm and Marcuse about this capitalistic society has helped a section of intelligentsia and students to create disrespect regarding capitalism. So the road to attain Marxist theories are become smooth. This is also true that they have made such novel comments regarding individual psyche and capitalistic system that was still out of focus of the Marxists. On the otherside the negative attitude of Marcuse and his colleagues about organised socialist movement create great loss of the working class and its institutions.

Marcuse's revolutionary theory has opposed to form democratic united front against imperialism. The old anarchist terrorist groups have resurrected. As a result in many areas the potentiality of revolution is jeopardised and the reactionaries have become much forceful.

Marcuse identified emancipation and pleasure at the same time. Though Marx considered the free human society as the precondition for the actualisation of innate endowment of the individual. Marx has not indulged hedonism. Marxists do not think that freedom and pleasure are the same thing. But according to Marcuse - "Mankind becomes free only when the material perpetuation of life is a function of the abilities and happiness of associated individuals."

All along there would be differences regarding devotion and attainment, wish and wish-fulfillment. Human wish, satisfaction and transcendence are not the subject of study of Marxism. Man would march forward. To create and develop this world, to make it much more beautiful enriched man will step forward much more steadily. Always man would sacrifice for others, he would not give significance about failure and dissatisfaction. It is a great error to think that the path to reach communism from socialism is comparatively smooth or less thorny. Man may become satisfied with some insignificant items, but that is due to his ignorance. He may remain satisfied with gross hedonistic pleasure. There is no relation between Marcuse's hedonism and Marx's actualisation of innate endowment. We want a non-exploitative socialist society not for simple hedonism but for actualisation of our essence, for our spiritual development, for attainment of the impossible. Painful creative urge for expression and outcry of an artist would persist in the communist society. No Marxist would be satisfied with the hedonism formulated by Marcuse.

Another characteristics of Marcuse is that he rejects historical materialism. According to Marx when we develop ourself from socialism to communism then we have been emancipated from the realm of necessity to the realm of freedom. Marcuse also thinks in that way but he rejects the methodology, rules-regulations that have been proposed by Marx to attain this. According to Marcuse there would be rules-regulations in the capitalistic society but as the socialistic society is free so there would be no rules and regulations. Where is freedom if it is regulated by a cause and effect relation? Man affected with compulsive neurosis performs some behaviour involuntarily. When the action and thinking is beyond's man's control then that behaviour is not free. So according to Marcuse only the spontaneous or self-generated behaviours are free.

Marcuse denies the historical continuity and ridicules the concept of discontinuity. His post-revolutionary utopia is totally alienated from the past. The structure of that society is also bizarre. All the connections of past have torned, there is no need to know the past and the unforeseen future is also totally unknown. All engulfing totalitarianism are individual terrorist force so where is the difference, who can say? We have to struggle to break our slavery-chains. But consequences of this struggle is uncertain. We do not need any teaching from our past experiences, we need only struggle and jump. There is no need of organisation in this struggle, neither we need any central leadership, no need of change in quantitative leap, we only need qualitative change in one leap.

We have to travel one planet to another in this capitalism-imperialism but not in the planet of socialism. Not here, not here, anywhere else. No past, no capitalism, no socialism, no communism. Negation, negation and negation. Go ahead, go ahead and go ahead. Burn

the waste products and go ahead. This is the message of Marcuse. There is much passion, romanticism, emotions in this words. This revolutionary philosophy of Marcuse is terribly attractive to the unexperienced young mind. In a special condition of Europe in the mid-Nineteenth century the message of Bakunin was also reared in this way. Today in a separate circumstances in a special historical moment Marcuse is also reared in America.

Now we can highlight to some extent the revolutionary philosophy of psychosexual theory. To correct Marxism with the help of Freudian theory is specially a interesting-exciting endeavour.

The Repression and Sublimation theory of Freud is not unknown to our readers, yet we are repeating the zist.

The father of primitive hoard-community has the only right to enjoy all the females of his community. He also controls his sons and deprives them of any female association. As a sign of protest the sons gather together, kill their father and devour him. They develop a sense of guilt after killing their father. Driven by this sense of guilt they gathered and spontaneously inhibit incestic relationship and impose various taboos while founding this primitive society. They volunteerily and ceremoniously discard this instinct of enjoyment. In this way, "Thus there came into being the first form of a social organisation accompanied by a renunciation of instinctual gratification; recognition of mutual obligations, institutions declared sacred, which could not be broken - in short, the beginnings of morality and law." (S. Freud, *Moses & Monotheism*, New-York, 1949, p.129)

It is needless to say later the Anthropologists working with the history of race-formation do not support this kind of theory of creating civilisation. Though Freud were quite aware regarding the non-recognition of Robertson Smith's this kind of Anthropological theory but then why Freud embraced this kind of theory? "I have often been vehemently reproached for not changing my opinions in the later editions of my book (*Totem & Taboo*), since more recent ethnologists have without exception discarded Robertson's Smith's theories and have in part replaced them by others which differ extensively." (S. Freud, *Totem & Taboo*, 1939, pp. 251-58) Knowing all this things he could not discard the myth created by Smith. Because this kind of myth has supported his theory of Libido.

Marcuse unhesitatingly has accepted Freud's this theory of mythical foundation of civilisation. Though there are gross incongruity regarding this non-recognised theory of race-formation. "Yet Freud's account is in fact internally incoherent and self-contradictory. As in Hobbes's account of the social contract what has to be explained is how the transition can have been made from a condition in which the relations between men are purely those of force, in which each seeks to impose his own will on others, to a condition in which there are socially established norms and institutions which regulate human behaviour in an impersonal fashion." (Alasdair Mac Intyre)

What is the reason behind developing this sense of guilt after killing their father? There must have some rules regulations or prohibition in the life style of that 'primal hoard' so they developed this sense of guilt. Apart, "A contract cannot be made except when the institution of promising and norms regarding the promise keeping are established. Thus the allegedly primal state is not pre-institutional, pre-legal or pre-moral at all."

Based on this story Freud developed his Repression and Sublimation theory. Repression of instinct specially sexual instinct was the principle condition for the foundation of society

and civilisation and as a result of sublimation developed the higher form of art and culture. On the oneside there was internalised paternal authority in the form of rule of the 'Super Ego', on the otherside there is an endeavour of 'Id' for its expression. So 'Ego' has to make the balance between this two opposition forces. In this way the Ego maintains its integrity. To satisfy our all sorts of desire of pleasure we have to control and repress our instinct due to external pressure. We have to restrain our passion.

The history of civilisation is also the history of repression of primitive instinct, history of self-abnegation. The force of all social development is Super Ego. It is the transformed social prohibition of primitive taboo of the primal ancestral patriarchal religion-moral vices. Modern man born with the unconscious incestal desire and its oppositional taboo. The history of all civilisation are the history of struggle of this instinctual repression and sublimation. Influenced by Freud, Marcuse is also of this opinion. Apart he has accepted the theory of 'hedonism' of Freud.

Why Marcuse takes the help of Freud for correction and purification of Marx? Because, in his opinion Marx has given correctly the reasons of crumbling down of the capitalistic society. But he has failed to show the reasons of how and why the revolutionary ideas would develop in the mind of the working class. We have said earlier that Marcuse does not consider the statements of Engels and Lenin are of Marx. To eradicate this poverty of Marxist revolutionary philosophy Marcuse takes the help of Freud and he has transformed Freudian theories according to his wish.

Marx was principally concerned with human community and collective man, he remained silent and detached regarding individual man. Marx could not follow this theory that individual man is only seekers of pleasure. One cannot find any revolutionary social psychology in the writings of Marx. Marxists are not interested about individual psyche. The followers of Marx consider that the economic reasons sufficient for fall of capitalism would create the revolutionary consciousness among masses like 'automatic reflexes'.

This conception about Marx is gross and mechanical, sheer ignorance of individual consciousness and revolution. If we analyse the history of capitalism then we will see that he had correctly realised and depicted regarding the flow of history from 1848 upto 1929. Since then the history does not follow according to his imagination and prediction. The working class of Europe failed to dominate and got the control of world drama. Conversely they view the forward march of Fascism as a helpless spectator. They surrendered to militant nationalism like insects.

For this reason in this changed transformed situation, Eric Fromm and Herbert Marcuse are very much reluctant to accept working class as the organiser and leader, they have realised the narrowness of Marxism.

They think oppression, exploitation, control of the rulers and capitalists are the only stumbling block for the emancipation of the working class, not the resistance. In the layer of their consciousness, in the perversion of their mindset are embeded the force of opposition for their emancipation. To identify this oppositional force they take the help of Freud. The revolutionaries of Frankfurt take the help of the middleclass conservative intellectual of Vienna. "It has been conjectured that Freud, while a youngman at Paris acquired the fear of the politics of the masses which he afterwards exhibited. Certainly a contrast between civilisation on the one hand and the masses on the other was part of the ideology of French conserva-

tism, nourished as it was on fear of the Revolution and more of the Commune, which reappears in Freud's writings. (Mc Intyre)

They enriched Marxism with theory of that person who consider revolution and masses as the stumbling block for civilisation. Fromm found this oppositional forces in the obsessive tendencies and Marcuse found the poverty of emancipation and consciousness in their one-dimensional perversion.

This civilisation and various forms of arts have developed from this sexual repression and constriction of sex-drive. Fine arts, skilled art, literature all are created depriving this sexual instinct. Even the unskilled physical labour is also the result of self-abnegation. Everywhere we find the history of self-repression. As a result of this there is distortion in the mind of people of this mechanical age. Ordinary people are now habituated to think only in an one-dimensional form. Only the momentary time is reflected in our psyche.

It is impossible to think correctly of future planning, revolutionary philosophy and development of consciousness for an one-dimensional man. "The advancing one-dimensional society alters the relation between the rational and the irrational. Contrasted with the fantastic and insane aspects of its rationality, the realm of the irrational becomes the home of the really rational ..." (H. Marcuse) There is the tendency of one-dimensional thinking among the revolutionaries. As long as there is no radical change of their instinctual-syntax like the ordinary people all the revolutionary endeavours would be jeopardised; even if there is any revolution it would be transformed into counterrevolution.

Freudian social theories are established against the opposition of sexuality and civilisation of our society. Marcuse does not believe in this oppositional theories. Freud believes that emancipation and pleasure are mutually oppositional. Marcuse thinks that emancipation and happiness are equal in terms and one directional.

According to Freud freedom is emancipation from instinctual drive and passion and civilisation is sexual sublimation.

Marcuse does not reject it straight forward but opines what Freud sees the oppositional form between freedom and self-satisfaction in one side and sexuality and civilisation in otherside. It is not at all the natural thing of human species. It is developed due to specific social condition.

Yes, it was necessary primarily to repress the sexual instinct during the first part of civilisation. Without strict celibacy there was no other way to fulfill our demand.

But distribution of commodities and methodology of organisation of works have always imposed upon man and as a result of that to sustain this kind of process uninterruptedly the habit of unnecessary repression are promulgated. We have to sacrifice our self-satisfaction. Today in this era of abundance of commodity and development of technology repression and penance are necessary only in the interest to keep the structure of a specific social system, their class interest and influence of that special class of the society. In the language of Marcuse the surplus suppression is not at all necessary and this special society is also not unchangeable.

Marcuse has corrected the reality principle of Freud and replacing it with his theory based on performance principle. Pleasure is sacrificed not at the direction of social necessity but at the order of the headman of the society. The dominating ruler in their interest

promulgated this rules-regulations as necessary prerequisite and man is abiding by this rules-regulations without any question.

Sexual repression and maintaining penance in a strict life style is not only unnecessary in today's society but it is also unhealthy, hindrance for any progressive thoughts and unfavourable for any revolutionary thoughts. It is the mindset of slavery. The preconditions of man's emancipation are free from sexuality and to follow the path of unrestricted satisfaction of pleasure.

Unlike Trotsky and few someone as a whole the Marxists consider the libidinal theory of Freud worthless, unreal and they think it is not permissible to Marxist theory. They also consider that the materialistic psychology is developed based on the conditioned reflex theory of Pavlov and the reflection theory of Lenin. So what is objective to revive Freudian theories in this era? Is it a genuine search to analyse the individual psychology or a bad intention to guide the revolution in the instinctual muddy slippery way?

Marcuse has accepted all the fantasy or imagery of Freudian theories. He does not criticise Freud's theory of 'Thanatos'. Though he has given hint that libidinal theory is partially correct. Yet we can say, he has confused the youth minds of America revising its unsocial destructive part and makes it more attractive and palatable. According to Freud, in early age sexuality is dispersed throughout the body and they are centralised in few specific areas of the body. An healthy adult is capable of normal sex organ based sexual satisfaction. As a result he develops attraction on opposite sex, love, marriage, procreation etc. all this incidences. For species preservation he has to build a nest and maintain a family discipline. This is the theory of Freud.

Though Marxists do not agree totally with this statement yet they agree to some extent of this statement. Specially love of man and women, mother's love all these things are human potentialities that can be actualised in favourable conditions. Marcuse thinks due to excessive repression there develops the sex-organ based sexuality and the tendency of monogamy. But he also thinks that this monogamy is irrational and this conjugal life based family is incoherent. In rearing up children perhaps the role of parents and family seems to be non-revolutionary attitude. But we cannot ignore his attitude that revolution would be enhanced with the feeling of sexuality in whole body.

In the first phase of capitalistic society though it was male dominated yet there developed families with healthy conjugal relationship. In the system of socialism this relationship enhanced to much more beautiful and integrated condition due to equal rights of man and women. Marcuse is attacking this marriage based monogamy family and inviting an indiscipline and chaos situation, not the revolution. Though in the era of capitalism in many instances love and romantic feeling transformed into commodity, female body is purchasable commodity and conjugal life has become unhealthy still the family environment is not that much poisonous. Does Marcuse want to vitiate the environment inviting free love with revolution and actually mixing uninhibited sexuality as a part and parcel of revolutionary activities?

Where many of the disciples of Freud are sceptic about the existence of 'death-instinct' though Marcuse has accepted *Thanatos* embedded in human psyche. He writes that many times man voluntarily violently plays with death. According to him the destructive part of today's technology is nothing but the deathwish of man. "Beneath the manifold rational and

rationalised motives for war against national and group enemies, the deadly partner of *Eros* (that is, *Thanatos*, the death-instinct) becomes manifest in the approval and participation of the victims." (*Eros & Civilisation*, 1955, p.55)

Without imaging *Thanatos* Marcuse may conclude that today's one-dimensional man is vulnerable so they are accepting death voluntarily. In fact somewhere he comments, "The tolerance of positive thinking is enforced tolerance—enforced not by any terroristic agency but by the overwhelming anonymous power of efficiency of the technological society. As such it permeates the general consciousness—and the consciousness of the critic. The absorption of the negative by the positive is validated in the daily experience, which defuscates the distinction between the rational appearance and irrational reality." So why he is trying to establish *Thanatos*?

In this reference we do not think that there is sufficient reasons what Marcuse-critic Mc Intyre has said.

Man is habituated to say something, to do something, but regarding its source he is not completely aware about its result or consequences. Freud has taken the help of imaginary unconscious mind to analyse all this things.

According to him in our daily life in the form of faults, joke-humour what we have done which we do not meant to do, but we do by the drive of our unconscious wish. According to Freud majority of our works are unconsciously motivated. Marx does take the help of this imaginary unconscious and he analysed our involuntary actions with the help of characteristics of social organisation. This society, organisation, institutions are all created by man; but they are run by their rules and regulations. The common people are not aware about this rules and regulations. Nobody can influence this rules and regulations or this running according to their wish. So they cannot understand the sumtotal result of this running. If we consider it in larger perspective then it is much more impossible to comprehend.

Capitalism is proceeding in a destructive pathway. Activities of the capitalists are accelerating this destruction. But the capitalists certainly do not want this destruction. As they do not know the economic rules and regulations so they are engaged in all sorts of self-destruction. Those who are aware of it they have also failed to control this forces. The intelligentia, capitalists are also alienated like the working class. Perhaps they do not think this capitalist society as infallible like our working class. Because their labour power are not exploited. But their labour or work are not self-motivated or self-regulated.

In a comparative analysis Mc Intyre has considered Freud's sex based unconscious theory and Marx's economy based alienation theory in the same category. Unconscious theory is totally hypothetical but though we cannot give total physiological explanation of alienation theory yet we cannot reject the socioeconomy based sources. Why we do engage in war? Mc Intyre has raised this question, "... If we could explain the occurrence and destructiveness of modern war by referring to the workings of economic system (as in fact we cannot) we should not need to invoke unconscious destructive instinctual drives to explain the same phenomena. ... Perhaps both causal agencies are at work." (Mc Intyre)

It is not possible to explain totally war, violence, cruelty, beastly attitude with the alienation theory so do we say that the destructive attitude is lay hidden in our mind? Why do we take the help of that theory? We dwell in such a social system where violence is a reality.

In unconditional reflex to protect ourself we take the help of violence and strike others and gradually that become a habit or conditional reflex. We do not deny it. In the time of war every soldier feel insecure. There is tremendous propaganda, publicity to create violence among masses. Each and everybody more or less lost their mental balance. They easily influenced by suggestion like hysteria patient. Fear as obsession erase their good sense. They become delusional like 'paranoid' patients. Whether true or false radomly they believe anything about the enemies. He fantasise about beastly torture so he can endure any beastly torture against anybody. So the only way of self-preservation is any form of attack that he can think as rational. Can't we explain violence and beastly act in this way?

However at least as a critique of 'Eros and Civilisation' Mac Intyre does support Marcuse. He opines in this way regarding the theory as proposed by Marcuse amalgamating Marx's alienation theory and Freud's libido theory. "It is finally worth noting that in *Eros and Civilisation* to young Hegelian theme recur. The project of explaining human culture as involving the alienation of man from his sexuality, of his seeing Eros at the heart of human things and alienation in the forms under which Eros is apprehended and encountered is essentially Feurbach's."

Emancipating from the libido, extinguishing sexual alienation the emerging person would be the pure revolutionary and he would carry out emancipation of the species. Those who are residing at the industrialised institution based society they are all part and parcel of the establishment. It is not possible for them to fight for any emancipation. Marcuse does not give that much emphasis on the crisis and contradiction of this society. He gives emphasis on the forces that are outside the society. In an interview with Gunther Busch Marcuse says, "These young people no longer share the repressive need for the blessings and security of domination—is in itself incapable of exercising decisive political pressure. Only in alliance with the forces who are resisting the system from without can such an opposition become a new avant-garde."

The American student-youths are not true revolutionaries, the true revolutionaries are residing elsewhere. In the concluding chapter of 'One Dimensional Man' Marcuse writes, "The totalitarian tendencies of the one-dimensional society render the traditional ways and means of protest ineffective ... ."

"However underneath the conservative popular base is the substratum of the outcasts and outsiders, the exploited and the persecuted of the other races and other colours, the unemployed and the unemployable. They exist outside the democratic process."

But can they pass the examination of revolution? Are they free from this 'surplus suppression'? Is revolution possible without the revolutionary consciousness? Marcuse is not sure if they win and the barbarism is gone then there will established a free society.

If they can join with the man of advanced consciousness of humanity then we can expect true revolution. "But the chance is that, in this period, the historical extremes may meet again: the most advanced consciousness of humanity, and its most exploited force. It is nothing but a chance."

Who are this 'advanced consciousness of humanity'? Almost all followers of this society are masses. They do not know what they want. Only a few (like Marcuse?) can understand what the people want and how they can be emancipated. They are those people who have

eradicated their sex-alienation and become free man and true revolutionary. Actually Marcuse believes in 'dictatorship of the minority' with advanced consciousness. Marx wanted that man will free himself with his own power and Marcuse wants to free people. "The philosophy of the young Hegelians, fragments of Marxism and revised chunks of Freud's metapsychology: out of these materials Marcuse has produced a theory that, like so many of its predecessors, invokes the great names of freedom and reason while betraying its substance at very important point."—In this way Mc Intyre concludes his criticism about Marcuse.

Is this theory of Marcuse is truly original and novel? 'Eros and Civilisation' published in 1955. Before that the bourgeoisie ideologues have left the rational discussion. Second World War, Hiroshima, 'Cold War', America's war against Korea—all these incidences have shaken very much of the mind of philosophers and litterateurs since 1950. Nothing left regarding morality and ethics. Before that Kafka with his powerful hand has depicted the pitiful shattered picture of man of the era of technology. So the cry of human essence and absurdity of society become the content of art and literature. Crossing the barrier of society many thinkers have tried in search of free society. The artist and litterateur have vacillated in the beginning of Fascism in Italy and Germany.

At the time Marcuse was compelled to leave motherland opposing Nazi philosophy, with one decade of this incidence Camus, Sartre, Beckett build up barricade at the streets of Paris against Hitler's soldier. Later all of them were suspicious regarding this form of movement. We do not think to elaborate the reasons behind it. Though Sartre is exception. The art and literature did not want to see life traditionally and conventionally and they did not want to change the society in that old fashion. Instead the individual protest of the angry youths in 'absurd' attitude became the subject of art and literature. We can see bold expression of polygamy and homosexuality in the art and literature. The sensitive youth's mind newly feel the bohemianism. We are locating this bohemianism philosophically as an organised propaganda in Marcuse.

"What traditional Marxism saw as petty-bourgeois bohemia closely allied to the lumpen-proletariat has become in Marcuse's latest theoretical, stance the potential of change." (Mc Intyre) We have got a new definition of 'bohemia' as 'outsider' and quickly this word has got a currency and serious research started with the word 'outsider'. To see the society from outside and to break it—this was the story of the day. Drama of Jean Jene depicting revolution and sexuality stirred the minds of the intelligentsia violently. Within one year 'Eros and Civilisation' was published this side of Atlantic and overwhelmed by this incidence discussion started and the drama 'The Balcony' staged by Jean Jene. So far we know about Jean Jene she is the model revolutionary shaped by Marcuse.

In her autobiography she candidly admitted that, "For a time I loved stealing, but prostitution appealed more to my easygoing ways. I was twenty ... Abandoned by my family, I found it natural to aggravate this fact by the love of males, and that love by sterling and stealing, by crime, or complicity with crime. Thus I decisively repudiated a world that had repudiated me." Malice of Jean against this cruel society is natural. But in the form she expressed her grudge, or her literary creativity is unnatural at least at the eyes of the Marxist. What Jean has drawn the picture in 'The Balcony' is very similar to the model revolutionary of Marcuse. The drama is build up based on Thanatos. In the opinion of the dramatist, "sex

is essentially a matter of domination and submission." Any social man is impotent. Revolution originates from sexual drive and passion of domination. We cannot change our society by revolution. We cannot control the reality.

During post Second World War ineffective aggression and sense of alienation of the intellectuals and petty-bourgeois are expressed in various ways now a days in art literature and philosophy. We see echo of all these things in Marcuse. In his statement we can find the anxiety, tension, fear of the contemporary period of atomic warfare and era of automation. Marcuse has not enriched Marxism but distorted it.

We need sufficient discussion regarding Marxist sociology and psychology. We have to enrich and update the social sciences with materialistic psychology. Those days are gone when we will think that individual mind is nothing but a fraction of the collective or it is sheer subjective. Much damage has been done. But Sartre, Fromm, Marcuse all three stallward tried to analyse individual mind with the help of Freud's theory of sexuality and to update Marxism they have done much damage to it. Marxism will make a safe distance from 'Coprophilia'. Marxism is not something to play with dirt and filthy materials.

It is a matter of great regret that a section of American 'radical' specially dramatists are indulging in their politics with this coprophilia of Marcuse. 'Eros and Civilisation' has become gospel to them. They think that the pleasure of art and literature is like organic pleasure of sex. "Art is like sexuality—a primal pleasure." There will be repression of art if the sex is repressed. "The reification and repression of sexuality will go hand in hand with reification of art." These two quotations are from the magazine of a progressive dramatist. What Marcuse says about art is like this.

"Art is perhaps the most; visible 'return of the repressed' not only on the genetic level, but also on the genetic-historical level. ... Art challenges the prevailing principle of reason: in representing the order of sensuousness, it invokes a tabooed logic—the logic of gratification as against tirat of reason." We think a section of radicals has accepted this definition. "Snell and taste give, as it were, unsublimated pleasure. ..." Perhaps they have accepted this statement of Marcuse.

It is needless to say art and literature have transformed into commodity in capitalist countries. So the interhuman relationship and many other things have changed a lot. But that does not mean, we are now repressed by primitive instincts. This has become due to the rules of capitalism. Marxists do not think sex and art in the same category. Though they are a bit shy, constricted in any discussion of sex but they do not feel ashamed if they do not find any fulfillment of artistic aesthetic in primitive instinctual drive. They would never like to seek the body odour of man or to lick it like the Marcuse-devotees. Hopefully, a section of the youth are not that much Marcuse-devotees. Kon Bendit has said it clearly, "Some people have tried to force Marcuse on us as a mentor: that is a joke. None of us have read Marcuse."

We need immediate radical change of this society, this world, this lifestyle, these values. Not gradually step by step, immediately in one stroke we have to vanquish this present and after vanquishing the age-old we would find the seashore of our dream of golden island. After much sorrows and miseries we would find much pleasure and happiness. We have assured with this message through ages. For this reason the message of god, myth, old stories create so much sensational feelings.

Theory of Marcuse or any theory like this will attract and influence the plain and simple students and all poverty stricken people. As the miseries of people increased, problems seem insalvable, the torture and cruelty increased, so he gets pleasure of more being enveloped with the dream of utopia. Then only he can hear everywhere the heavenly welcome song of 'Millenium'. All believes are torn yet he wants to believe again and again. In this believe he can sacrifice, left everything and come forward.

In search of this heavenly abode the Hippies travels the mystic East, wait for Gedo in the drama of Becket, in the light of existantialism Sartre revised the Marxism and with the help of Freud's metapsychology creating ultrarevolutionary thoughts of Marxism by Marcuse.

Written in October 1970 PAS

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*From the desk of the mind-painter*

## **The Tricks of Astrologer**

Dr. Goutam Bandyopadhyay

For the last few days there is something wrong in the family. After marriage the elder son was separated, whether it was due to the provocation of his newly married bride or anything else it could not be ascertained. May be the boy has changed and now he is giving excuse on behest of his wife. But he was not this type of lad at anytime. On the otherside the younger son was good at study. But taking everybody dumbfounded he got back at B.Com part I examination. Now he is considering to leave the study. In midst of all this disturbances perhaps heart problems precipitated of her husband! Then one close door neighbour aunty suggested-listen, I cannot understand why various disturbances are occurring successively. Is it not due to curse of goddess Sani! I have heard of one astrologer's chamber at Rabindrapally just beside the railway station. So daughter-in-law you can try and make a visit there. He is a good fortune-teller.

Another close-door neighbour supported this proposal-yes, I have visited there once. He has told me, you would have to accept through out this year as your bad patch of time. If you pass this year than you would be free from all hazards. Then I can achieve many things as foreign tours, immense wealth and such many things. To pass this year safely astrologer has suggested me to wear a *Gomed* ring at the third day of dark fortnight. Really after that I am free from any major accident.

Jayita Basu informed all this to her husband and got a scolding, don't get yourself involved in such dangerous tricks. I think that astrologer is not at all a good person.

Perhaps everyone has some particular way to navigate and that is specifically of his or her. So one day after completion of her household chores when everybody are out of their daily works, Jayita locked her house and get out in the mission to visit Rabindrapally just beside the railway station. It was the noon on the month of June so the surroundings were

calm and quiet. The astrologer was available at his chamber from 4 PM in his house. A modest number of people gathered there. Jayita got the call after two or three persons.

As soon as she entered father Chaityna astonished seeing her-Oh my god, you have passed with a lot of miseries! So innumerable troubles and miseries you have to pass in your whole life!

Hearing this Jayita were spellbound-how you have known all this things.

After this comment she immediately sat with a thud in front of him and touched father's feet in obeisance.

-You are facing miseries since marriage. You have no peace of mind with your son, not even with your husband. -

-Yes yes absolutely correct. My husband is good; but I am disturbed regarding his illness.

-Yes I can read that from the skin lines of your forehead.

At the request of father Chaitanya Jayita spread her left hand and was agog staring at the face of him, to hear about her unpredictable future. She distinctly felt something around her throat and also felt palpitation continuously. The expression of father at his face and raising eyebrows were immediately being translated at the face of Jayita. Once father suddenly stopped and Jayita immediately uttered-Is anything wrong father?

Father while shaking his head uttered-I don't think it is good for you!

- Why, please tell me what happened!

- Is it not May 2007?

- Yes, yes.

-Then there is every chance of your death within this year!

Hearing this within seconds Jayita fell flat. Her body became stiff and took a shape of a bow and a groaning sound came from her mouth. This created a hue and cry. Everybody became restless seeing her in this condition. Father was also bewildered. Water was sprayed over Jayita's face. A modest crowd gathered. The nearest primary care physician was consulted. Among them somebody recognised Jayita and informed her husband. Getting the news her husband immediately rushed Rabindrapally from his office. The doctor advised two-three days complete rest and to consult with a psychiatrist.

Husband Ranjan enquired-Please say me what exactly has happened on that day. Why you have gone there? Now you seems to be O.K. then why you are spending all day long in the bed? Everybody says that you have a fainting attack? Do you remember anything?

But Jayita kept mum to all this questions. Only she stared beyond the open window and found that one crow was trying to manage something with its beaks. Otherwise her daily routine and life was normal and at the lesiure hours she stared outside the window like a sculpture in a bewildered gaze. At night she could not slept and turned about restlessly at the bed.

Ranjan said-The local physician has suggested for a consultation with a psychiatrist. Though I cannot find any reason, however we can try.

Jayita did not give any answer to this suggestion, she only made a bewildered gaze.

Then only I saw two of them in my chamber. Ranjan Basu depicted as he knew about the matter. About the fortune-teller he said- Chaitanya Samadar was a clerk in the pension department of a government office. With his shrewd left hand he had emptied pockets of

many persons. After retirement he started this business as an amateurish fortune-teller and got success in one or two cases. That was the reason of his fame. Now a days clerk Chaitanya Samadar has a prophetic look as 'Chaitanya Baba' due to his overgrown hair and beard. Over and above he started to wear red ochre clothes and a look with ptosis eyes. As if he is detached from this material world, he is unconcern. Now you can talk to Jayita, I am going out.

Actually Ranjan Basu did not know the main thing, that I had been informed by Jayita. After Ranjanbabu's exit Jayita checked whether the door is properly closed or not, then she turned towards me and bursted into tears—Doctorbabu I have not told them the actual thing. I shall be off from 2007.

– Why, how this can be possible! I cannot understand you.

Then I hard the whole story from Jayita. With much astonishment I asked Jayita—And you believed all this rubbish!

– Why not, he had correctly said about some of my past reading my forehead. He has correctly predicted that I have to overcome much agony regarding my son and husband!

–Then listen, he is not at all competent enough to predict anything about you. Because it is not possible to say anything about anybody regarding his or her future. That is the charlatanism of the astrologer. They manage to earn in this way. They play with a set code of laws. Everyman loves him most. So if we say someone that you have to overcome much sorrows and miseries in your life then everybody would be pleased. And so they would find it as absolutely correct. They create confidence on you saying all this in the begining and in this way they start their business. In the middle age every housewife has some melancholy. She has managed to rear her children with much difficulties and they are now grown enough to become independent. So the housemaker feels lonely. On the otherside the intensity of the romance between wife and husband is also diminished. And also growing age acts upon their health and mind as they lost their energy. To cover this loneliness she developes anxiety and tension about the family members. So it will be a 'rule' that you would suffer from anxiety and tension with your children and husband. The fortune-teller has measured you and told all this predictions. Once he gains confidence on you about your past life then he has started venturing on you about the future and that would definitely create fear and helplessness on you. To rescue from this danger you will surrender to him as you have already developed confidence on him. Now he will pester on you to receive *nila, pola, gamed, cats* eye or something like that at the cost of few thousand rupees. Again to make it more trustworthy he will suggest to wear it in some good moment like third day of dark fortnight or at the sun set of bright fortnight. In your case Chaitanyababu has made some mistake. He has considered you courageous so he has shown you terrible fear. And that creates the whole problem. The fees-money have been transferred from Chaitanyababu's pocket to my pocket.

I tried to understand Jayita Basu, Astrology is a big pseudoscience.

–Just consider your zodiac is Ieo. He measured your fate considering it. But this system of determining the zodiac is so unscientific that you cann't imagine. Anyone's zodiac is determined by the rise of the star at the eastern sky at the time of his birth. Firstly the clock by which we determine the birth time may run first or slow. Over and above it is not recorded in any hospital exactly because everybody then remains busy to know the general condition

of the neonate. We have trained in this way in our hospital days. Later the birth-time is documented as a record as an average. So you can imagine addition or alteration of two-three minutes will change the whole scenario of zodiac. Now you think measurement of your actual zodiac and that it is written in your brief horoscope are how much meaningless.

Secondly, why the other stars over the newborn will not create any influence like the actual zodiac? If it is more nearer than the original zodiac? Thirdly the Leo has been arbitrarily created by a cluster of permutation and combination of stars, does it mean it would not be otherwise so far creating influence is concerned? See how much childish imagination it is! We are finding him as Leo from this earth's surface yet it may look like anything from any other surface about this star or planet. Besides the stars creating cluster formation of Leo are far apart of few thousand light years, so how they can maintain any relation among themselves? Then the clouds that are forming the shape of a Leo should have some influence regarding our future. Astrology is full of this kind of childishness. The activities of this Universe or the stars are not so cheap that it would be busy with the fate of one Mrs. Basu and her husband and children of this earth. Actually it is difficult to perceive the greatness of this Universe by us so we fantasize all sort of childish play with this Universe. Helplessly we surrender to the socalled guardian of this child's play. They with there common sense judge our fate and beat in the bush considering all the possibilities. Generally we see fifty percent of astrologer's predictions are correct. We recall all this correct predictions but try to forget their faulty predictions. As we want to depend on somebody in our crisis period so we try to remember this correct predictions.

Meanwhile I noticed Mrs. Bose was eagerly attentive to my explanations and her bursting out condition of melancholy at her face were somehow vanished. Though she was confused and stare at me in a bewildered gaze.

I suggested—I am giving few medicines that will give you good sleep at night. Many a days you have a sleepless night and with this you can smoothly combat your prevailing anxiety and tension.

Again I had suggested her to make a fun.

– After the night of 31st December of 2007 when it will be 1st January of 2008, in the morning straightway you will go to the fortune-teller and with full boast of pride you will say, see here I am Jayita Bose, still alive in this 2008 without your *Nilu, Pala, Gamed*.

And this is the first time that I found a smile on her face. However she had visited again twice to me and seemed stable in all sides. She was going outside home alone, marketing. I also discussed with her the prevalent anxiety within her that draw her to the astrologer. How that could be solved. I suggested her to have a visit few days before 31st December.

Before 31st December when she came I had given him further suggestion and reminded her that my phone would be switched on all the night in 31st December so that you could call me in any emergency.

On 31st December at midnight about 12-30 I got a ring from her—Doctorbabu when this 31st December expire, after 12 midnight or at the dawn when there will be Sunrise?

I said—Year 2007, 31st December all this are according to English calender. Then see the fun, your astrologer is accounting everything according to Hindu scriptures but he is giving judgment according to English calender. So now you can understand that you have to stand before him at tomorrow morning!

Though she requested—Let me see untill dawn.

– O.K. you can see.

Whole night Jayita Bose was awake, always agog to see at the outside whether it was morning or not. But there was a confusion which should be appropriate for her, dawn i.e. clearance of darkness of night or Sunrise. She developed tremendous excitement. In the meantime I was fallen sleep. I woke up at her phone ring and found it was morning. – Doctorbabu now it is 2008, where you reside? We have decided to go to you with some sweets to show my making obeisance.

I objected—Why? I have not saved you. You would exist as today only I have suggested you, believe my words.

In the first week of January Jayita Bose came to me with her husband and a packet of sweets. She presented with an open-hearted laugh. Husband asked—Just think what a mesh she has created.

I recalled her about the condition on which I had agreed to treat her.

Violently nodding her head Jayita said—No, no it is not possible for me to go there. That Rabindrapally is now a place of horror to me. I just avoid that place. Besides the astrologer is aged. Perhaps he does all things to run his family. I feel pity for him! For mere subsistence he is telling lies to the people. **PAS**

## The Alphabets of Mental Health Care Bill

Dr. Priyaranjan Avinash\*

The times are changing. The mental health treatment and care never received this kind of attention and curiosities from all quarters of the society. We are in a phase of transition. A new act is in making and if my resources are correct then we are most likely going to have a new act in 2015. The existing act The MHA, 1987 could not protect the rights of persons with mental illness and promote access to mental health care in the country. The growing concern that the MHA, 1987 needed to be amended gained urgency with the ratification of the United Nations Convention on the Rights of Persons with Disabilities

(UNCRPD) by the Government of India in October, 2007 which requires India to amend or replace laws not compliant with the CRPD. The demand for amendments to Mental Health Act, 1987 was strengthened by the fact that the related Act, The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 was also in the process of amendment. Therefore it was proposed to repeal the MHA, 1987 and bring in a new legislation. This Bill addresses the issues of mental illness and capacity to make mental health care and treatment decisions; advance directive; nominated representative; rights of persons with mental illness; duties of appropriate government; central and state mental health authorities; mental health establishments; mental health review commission; admission, treatment and discharge.

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This bill is like a paradigm shift from the existing one. I would like take this opportunity to highlight the important ones using all the alphabets, for easy reading AND RECALL. Now let's start.

**Advance Directive:** Every person, who is not a minor, and have a capacity to make mental health care and treatment decisions, shall have a right to make an advance directive in writing, specifying the way the person wishes to be/not to be cared for and treated for a mental illness. It should be in writing and should be certified and signed by a medical practitioner.

**Banned:** ECT without anesthesia and chaining of patients. There was a huge debate over the blanket ban of unmodified ECT, however the founders and the ministry thought otherwise and claimed that one does not have any excuse to give ECT without anesthesia as there are around 20 thousand anesthetists in place of only 4 thousand psychiatrists. Also the unmodified ECT is considered inhuman and barbaric and the international consensus is absolutely against it.

Capacity to make mental care and treatment decisions is one of the founding stones for making advance directives

**Definition:** "Mental Health Care includes analysis and diagnosis of a person's mental condition and treatment, care and rehabilitation for a mental illness or suspected mental illness". This definition given by UNCRPD, has been accepted. This has been one of the latest changes in this bill. What was most surprising was the fact that there were more discussions on whether there is a need to define it or not, rather than what should be the definition.

**Emergency:** during the emergency situations the advance directive of the patient can be overlooked for the acute management of the person with mental illness. However the duration of emergency has been limited only to the 1st seventy two hours. Also ECT treatment has been kept out of the treatment options during the emergency. I find this a little strange as ECT is mostly used as an emergency treatment modality in suicidality and catatonia etc.

**Family:** means a group of persons related by blood, adoption or marriage. However a caregiver is a person who resides with a person with mental illness and is responsible for providing care to that person and includes a relative or any other person who performs this function, either free or with remuneration.

**Good faith:** No suit, prosecution or other legal proceeding shall lie against the appropriate Government or against the Chairperson or President or any other Member of the Central Authority or the State Authority or the Commission or the Board, as the case may be, for anything which is in good faith done or intended to be done in pursuance of this Act or any rule or regulation made there under in the discharge of official duties. Surprisingly psychiatrist's name does not feature in the list. I hope the omission is not purposeful.

**Mental Health Establishment:** Even GHPU (General Hospital psychiatric Unit) has been taken under this, and they will also have to follow all the rules and regulations of the proposed bill unlike previously. However the representatives of such units like that in premiere institutes such as AIIMS and PGI had their reservations.

**Insurance:** In spite of the obvious unwillingness of the insurance companies and surprisingly also the IRDA, the bill makers and the ministry did not budge from their stand of including mental illnesses in the list for medical insurance. The reasons cited by IRDA are at times funny 1) mental illnesses are like congenital illness. 2) mental illness always require indoor treatment etc.. However the standing committee of rajya sabha has been able to shake their misconception.

**Jail:** The current mental health bill does not believe in bringing jail to a mental health

establishment, rather in bringing mental health establishment and it is proposed that there should be at least fully functional mental health establishment in one of the jails of a state inside the jail hospital.

**Lock:** A person with mental illness can't be locked in or in more technical words, Seclusion practiced widely, has lost its legal sanctity. Though in the original draft of the bill, seclusion along with physical restraint both were there, on suggestion from some quarters the parliamentary standing committee deleted the word, seclusion from bill. I have my own personal reservations against it. Seclusion can sometimes work very well for a very disturbing delirious patient also, time out in children is a proven method of treatment for childhood behavioural problems. In case of physical restraint the guardian or the nominated representative has to be informed of every such episode within 24 hours. Also the mental health establishment has to keep a detail written report to be sent to the concerned review board every month.

**Least restrictive facility:** Every person with mental illness shall, (a) have a right to live in, be part of and not be segregated from society; and (b) not continue to remain in a mental health establishment merely because he does not have a family or is not accepted by his family or is homeless or due to absence of community based facilities. The appropriate Government shall, within a reasonable period, provide for or support the establishment of less restrictive community based establishments including halfway homes, group homes and the like for persons who no longer require treatment in more restrictive mental health establishments such as long stay mental hospitals.

**Mental Health Review Commission/Board :** shall have 6 members, one a judge, another a representative of the District collector, 2 Mental Health Professionals and 2 from either person with mental illness or care givers or organizations working in the field of mental health care. In a very recent development the term 2 mental health professional has been changed to 2 psychiatrists keeping in view the need to have experts in the field of psychiatry, for the better functioning of the board. The board is like a watchdog and also facilitator right from advance directive formation, nominated representative approval, admission discharge, revelation of information regarding person with mental illness and also periodical monitoring and inspections.

**Nominated Representative:** One of the new things in the bill. Every person who is not a minor has the right to choose a nominated representative, who can take mental health treatment and care decision on behalf of the person with mental illness. In case of a minor, his legal guardian is considered as his nominated representative.

**Informed Consent:** in the treatment plan and during research the informed consent of the person with mental illness and their nominated representative has to be taken.

**Person with mental illness:** The term 'mentally ill' has been changed to 'person with mental illness' to avoid branding and reduce the stigma.

**Question of mental illness in judicial process:** Some quarters were of the view that there is need to define 'unsound mind' in the act itself, as there IPC's in which unsoundness of mind is used as defense. However the bill, the standing committee as well as the recent meeting with the ministry all concluded that mental illness and unsound mind are not the same and the presence of one can't be said to lead to the other and vice versa. So unsound mind being a legal term, let the court take their final verdict on it from case to case basis.

**Registration:** every mental health establishment has to be registered with SMHA however

the provision of pre-inspection before the registration has been done away with. Also till the time the SMHA becomes fully functioning and come out with their rules and regulations a mental health establishment can have a provisional registration for a maximum of 12 months.

**State and Central Mental Health Authority:** The Bill seeks to create various new bodies and completely overhaul the existing mental healthcare system in the country. The Central Government and the state governments shall, within a period of nine months from the date on which this Act receives the assent of the President, by notification, establish, for the purposes of this Act, an Authority to be known as the Central Mental Health Authority and state mental health authority respectively. Their primary role is to register, regulate, supervise, train and advise all the mental health establishments under the central or in the state.

**Supported and Independent Admission:** Independent admission is like voluntary admission and supported admission is in the condition where the person himself/herself does not have the capacity to take decision for his mental health care and treatment, upon the application of the nominated representative, in such a situation however the duration is only up to 30 days, however if the treating psychiatrist can keep him for another 60 days then after 90 days, 120 days and 180 days on certification of minimum 2 independent psychiatrists and has to be approved by the mental health review board. A person with independent admission may be converted to supported admission if within 24 hours of the application for discharge from the patient, 2 psychiatrists certify that the person can be a harm to himself or to others or he has not been able to take care of himself, leading further to harm to himself. Again this has to be approved by the Board.

**Suicide:** this act goes a distance in decriminalizing attempts to suicide and concludes after some minor changes by the standing committee that -Notwithstanding anything contained in Section 309 of the Indian Penal Code and the Code of Criminal Procedure, any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress at the time of attempting suicide and shall not be liable to prosecution and punishment.

**Verdict:** The final verdict on the much controversial definition of Clinical psychologist for the purpose of this act has come and it has gone in the favor of RCI. Only psychologists trained from RCI recognized centre with a post graduate degree in psychology and an M. Phil in clinical psychology will be considered as clinical psychologist. However there is discrepancy in the definition of a psychiatric social worker and mental health nurse.

**WHO & UNCRPD:** Both have played covert but significant role in the formulation of this bill. India being signatory to UNCRPD in 2007, certain provisions are in keeping with its guidelines. The inclusion of the word CARE in the act as well as the inclusion of rehabilitation in the mental health care is some of the prime examples.

**XVI:** there are a total of 16 chapters in this exhaustive bill.

Yoga, Unani, Ayurveda, Siddha, Homoeopathy or Naturopathy, registered under the Indian Medicine Central Council Act, 1970 and working in the field of 'Manas Rog' and having a post graduate degree in 'Manas Rog', will also be considered as medical practitioner for the purpose of this coming ACT.

**Zenith:** We hope this upcoming act will ensure the care and treatment of persons with mental illness and take the cause of mental health to the Zenith. PAS