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RATIONALISTS OF MAHARASTRA

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Though the British rule in India was not directly responsible in its initial stages for the spread of rationalism, its very existence and influence were sufficient to compel the thinking section of the people to re-examine the traditional beliefs and ideas. The very phenomenon of a handful of people, coming from a distance of thousands of miles, conquering this huge sub-continent within half a century or so, and establishing a rule so strong that it could successfully prevent the growth of any opposition to it, had profoundly impressed the Indian people a century ago. "The Englishman emerges out of an egg, as big as a jackfruit, after it has grown for some time on a peculiar tree", was the substance of some poems composed during that period in parts of Northern India, indicating clearly how the credulous Indian mind reacted in the beginning to the British domination. Anecdotes of a similar nature were also current in Maharashtra. One of them, quite widely known, for example, is that after the conquest of *Lanka*, Seeta gave a boon to the monkeys, with whose help it was conquered, that they shall rule for a century in the *Kaliyuga*.

While such poems and anecdotes were indicative of the credulous simplicity of the Indian mind, it need not be believed that the Indian intellect remained in that state for any considerable period of time. Though the British rulers frequently promised that they would not interfere with the religions of the Indian people, cases of interference with inhuman religious practices were numerous, and it cannot be doubted that they compelled educated Indians to think

about the future of their religion : what it was likely to be, or ought to be ? It is quite natural that certain peculiar virtues should have come to be attributed to the rulers, and some of the prominent thinkers of those times should have begun to think about their achievements from that angle. The thought of those people was not properly recorded, but abundant evidence of it can be had from the little known private correspondence of that period.

Some laws promulgated by the British were responsible for awakening the spirit of rationalism. A number of rites, rituals and practices, which had been traditionally regarded as leading to salvation, were prohibited ; those laws could be defended only on rational grounds. The fact that some leaders of Indian society defended the prohibition of the practice of *Sati* or the permission of remarriage of widows corroborates the above view. The laws were followed by English education, which provided the Indian intellect with ample food for thought. Then, there were the activities of missionaries coming to spread the gospel of Christianity. They taught people to look at religion from an entirely new and different angle. The old, time-honoured, religious thought was bound to be disturbed by the study of secular subjects like Geography, Astronomy, Chemistry, Physics, etc. The traditional views that the earth is flat, that at its centre stands like a pillar the mountain of *Meru*, that the earth is at rest on the head of *Sheshanag*, that a shaking of his head causes earthquakes, that the eclipses happen when the sun and the moon are attacked by the evil spirits of *Rahu* and *Ketu*, were all bound to collapse in the face of the spread of knowledge resulting from scientific studies. The utility or the desirability of the day-to-day or ceremonial social behaviour also came to be publicly discussed. Along with the spread of education, there appeared a new type of literature, periodicals and newspapers. The origin of rationalism can thus be traced to the fourfold influence of the British rule—laws prohibiting certain traditional

social practices, the spread of English education, the growth of a new literature, and Christianity.

Sardar Gopalrao Deshmukh may be regarded as the pioneer of rationalism in Maharashtra. He placed before his countrymen a number of bitter and unpalatable truths in the middle of the nineteenth century. He started the practice of writing open letters to the people under the pen-name of "*Lokahitawadi*". A series of articles originally published in this form is still well known as *Satpatra* (Hundred Letters). The entire career of *Lokahitawadi* is well worth a careful study for various reasons.

Though born in an aristocratic family, he had little respect for, or pride in, the traditions of his class. Ever since his childhood, he was fond of books and study. In those days, literature on various subjects was not available in Marathi, nor were English publications easily obtained in such large numbers as they are at present. The amount of trouble one had to take in order to get information or gain knowledge, can be easily realised if one imagines the then existing conditions even in a city like Poona. *Lokahitawadi* used to avail himself of all opportunities of attending lectures by Englishmen or missionaries in Kirkee or similar places near about the city of Poona. That always meant a cross-country walk for several miles, in the absence of any road connecting these places with the city, and he would often have to return late at night, plodding through open fields and jungles.

In keeping with the customs of those days, it was necessary after every such occasion to bathe outside the house and enter it with wet clothes on, in order to free oneself from the polluting effect of the contact with foreigners. The ordeal had to be repeated every day even on return from school in the evening. *Lokahitawadi* never bothered about all these difficulties which he had to face in his pursuit of knowledge.

Having finished his studies, *Lokahitawadi* took up an

employment under the government. As members of the aristocracy, he and his brother were entitled to receive from the government a life-time allowance of two-hundred rupees per month, which in those days could easily have enabled them to live in a quite comfortable way. But, according to custom, the honorarium was to be discontinued if the beneficiary accepted any salaried employment under the government. That actually happened when *Lokahitawadi* entered service on a less remunerative basis. He possessed all the qualities necessary for promotion in the service. European examiners of his student days had spoken very highly of his abilities. He had acquired a remarkable command of the English language. His general accomplishments made him a favourite with his superiors. Within a few years, he occupied an important post in connection with the work of the *Inam* Commission. But his independent views on matters under the jurisdiction of the Commission brought him in clash with his superiors. Thereupon he was transferred to the judicial department, and he rose ultimately to the position of District and Sessions Judge. The significance of this career consists in the feeling of self-respect which was responsible for moulding it. The pride of feudal aristocracy was gone and its place taken by the desire to be independent and self-supporting, so characteristic of the individual in bourgeois society.

While in government service, *Lokahitawadi* was posted at a number of places in the Presidency of Bombay. Wherever he went, it was almost a habit with him to start a newspaper or a library. He was also fond of writing, as is evident from the voluminous correspondence in possession of his descendants. To write on loose sheets of a handy size, to put them together in the form of a book, with the subject mentioned on the opening page, was something like a craze with him, and a number of such "books" are still lying unpublished. There is also a huge

collection of essays written by him on various topics. His published works amount to about fifty, and they deal with various historical, social, religious and other subjects. Particularly noteworthy is his book "*Laxmijnan*" (Knowledge of Wealth), a treatise on economics which was published in 1852. Two other books on economics were published in those days. They were simply in the nature of translations. A critical examination of the Hindu social structure in the light of the broad principles of the science of economics was undertaken, in the first place, by *Lokahitawadi* alone. Priesthood, begging, charity—all came in for strong criticism, and the enormous waste through these channels was mercilessly exposed. Together with the priests, those rich social parasites, the feudal lords also came in for a ruthless attack. His writings show a strong desire for promoting the growth of trade and industry.

Freed from the old, circumscribed, grooves of thought and beginning to view life critically, intellect can penetrate every aspect of it. A critical examination of thought and action, with the help of reason and knowledge gained from it, acceptance of what appears to be proper on such an examination, and the strength and determination to hold on to what is thus accepted without regard for tradition, religion or popular opinion and prejudice, are some of the significant features of rationalism. The writings of *Lokahitawadi*, being a powerful attack on the old order, show clearly and unmistakably all these features. He challenged the traditional superiority of the Brahmins over all the other Varnas, and exposed the utter hollowness of its foundations, which lay in birth rather than in merit or quality. He emphasised the incalculable harm done to the nation by this idea of hereditary superiority. The Brahmins had been considered superior, he argued, as the guardians of the Shastras. But the knowledge of the Shastras itself has now lost its significance. The study of Nyaya, Vyakarana, Vedanta, or Mimansa, are now a sheer waste of energy.

The rituals prescribed by religion are simply for the benefit of the priestly class, and their performance is of no use either in this world or in that elsewhere. None of them has ever promoted the well-being or the prosperity of the people. On the other hand, religious doctrines such as that of Maya have always been responsible for misleading the people and for increasing sinful (anti-social) behaviour. The temples have lost their sanctity and have now become centres of sin. A host of such and similar other explosive ideas abound in the writings of *Lokahitawadi*.

It is not merely religion and religious behaviour that came in for the lash of his merciless criticism. He did not spare the richer sections of the community either, who often appeared as the champions of religion. The base purpose of their hypocritical doings were thoroughly exposed. Trade did not flourish in Maharashtra, nor had the Maharastrians much to contribute to the development of industry. The traditional vocations practised for generations were never sought to be improved. Many of them came to a stand-still or deteriorated under the impact of British trade. *Lokahitawadi* therefore discussed it at length how the British have taken up the functions of all the three higher Varnas - the Brahmins, the Kshatriyas and the Vaishyas, and have relegated all others to the status of Sudras, and how in spite of that degradation the Brahmins are still foolishly proud of their social superiority and past glory.

It may even be said that *Lokahitawadi* was the first Maharastrian to endeavour an analysis of the Hindu society from the economic point of view. There are many to-day who criticise these nineteenth century stalwarts, belonging to the period of the early British rule, as people dazzled by the British conquerors, their laws, education and industry. But if we can set aside the false and unjustifiable pride of traditional culture, religion and social life and behaviour, and study the writings of those early rationalists, it will be

clear that their eyes were not dazzled, but opened by the experience of the influence of new forces. They were able to see the coming revolution, a revolution that could not be averted by clinging to the tottering old. On the other hand, they realised that such clinging to the old might produce disastrous results. It was this realisation that led them to advocate a respectful and receptive attitude to the new. The opinion of Gopalrao Deshmukh, which has come to be known as the philosophy of the welfare of the people (*Lokahitawad*), was to receive respectfully the good in the new, instead of rejecting it with the help of the old.

Once upon a time, it was believed that social reform had nothing to do with politics. One of the reasons for this belief might be that most of the social reformers of those days came from the ranks of government service, and therefore carefully eschewed politics. Gopalrao Deshmukh was also a government servant, but he did not visualise the country's progress as if it was divided into water-tight compartments. On the contrary, it was his contention that politics, religion and social life were only different aspects of the same existence, which ought to be always viewed as a whole. He, therefore, argued that the English, though rulers, were after all human beings. They might be cleverer, wiser and more capable than the Indians of that time, but they too were likely to make mistakes. Their tendency to deny opportunities to capable and deserving Indians was reprehensible. The English were as selfish as any other people, and therefore did not allow Indians to progress beyond certain limits. They tried to impress the Indians with their pomp and power. It might be natural for them to do so, but it was certainly not natural for the Indians to be overawed.

The English were human beings just like ourselves ; they had not come from the heavens. Only Indians did not use their intelligence as the English did. We Indians should therefore go to the land of the English, live with

them and thus overcome the fear of them. Learning from them, Indians should endeavour to excel and to beat them on their own ground. This advice to the people, in the middle of the nineteenth century, was sufficiently advanced and bold.

Such and similar ideas are found scattered throughout the writings of Gopalrao. In one of his articles, he seems to have gone even much farther. There, he argues: "The English rule in India is not eternal; we shall also become wise and begin gradually to demand power. In order to remove our discontent, the English might part with some power. The more the power they give us, the more will it whet our appetite for it, and the English may begin to oppose our demands. If they do so, we may perhaps have to do what the Americans did when they drove away the English from their land."

In the same article, he also attempts to draw the broad outline of a free India. It was a time when the majority of the people were still sighing for the extinguished kingdoms of the Peshwas and the Moghuls. The revolt of 1857 also aimed at reviving these. But in visualising the political structure of a free India of the future, Deshmukh did not dream of the restoration of any dynasty. He suggested that in every province there should be elections, and popular rule of elected representatives established. The Central Government should be composed of representatives of the provinces. Most probably, he had the American Constitution in mind. In any case, he had no doubt that, in course of time, the English must go and popular governments would be established. He was uncertain only about the time factor. It might be a hundred or hundred and twenty-five years; it might take two-hundred years also. But it was bound to happen.

A similar attitude was taken by him regarding what later came to be known as the Swadeshi movement. Since the strength of the English rule lay in trade, it was there

that we ought to strike; that was his advice to the people. Goods from countries other than England should be patronised, and in the meantime efforts made to develop our own industries. It is only for resisting the English that we should buy from other foreign countries, but once our industries were developed, we should turn our back to all of them. Not only that, we should go without things which we cannot have from anywhere except from the English, but under no circumstances should English goods be patronised. When in 1870 an Englishman was appointed manager of a textile mill in Bombay, he strongly protested. He asked: Why is it that an Indian cannot be sent out to Europe, trained for the work of management, and put in that position? The slavish mentality of accepting the English as superior makes us, he contended, not only lose our money, but also leads us to stifle indigenous intelligence. While welcoming the slow economic transition, *Lokahitawadi* emphasised the need for bringing it about with dignity and self-respect.

He often praised the English and their rule. Many of his critics have bitterly attacked him for that. But the criticism, far from being fair, was simply a reaction to his attacks on traditional religion and learning. It nevertheless caught the imagination of the people, and has therefore been often repeated since. The belief that Gopalrao Deshmukh was simply a worshipper of the English resulted from the popularity of his critics. He did believe and say that contact with the British would make Indians equally wise and clever, and consequently the latter would eventually take their rightful place in the family of advanced nations. Therefore he considered India's connection with Britain as the result of some divine dispensation. But nowhere in his writings there is the slightest indication of his having held that the English were the incarnations of God, or that their rule in this country should be permanent.

His critics, therefore, have done him grave injustice

by picking out sentences or expressions from his writings out of their proper context, and picturing him in the light of these distortions. The result of that unfair criticism has been that the present generation in Maharashtra has almost forgotten him. If that is the case in his own province, it will be all the more so in the other parts of India. Only recently attempts have been made to undo this injustice to *Lokahitawadi* on the basis of a careful and dispassionate study of his writings. In this article, I have simply endeavoured to introduce him to others, who might also help the work of giving him his rightful place in the ranks of our rationalist thinkers of the nineteenth century.

AN ALIENIST ON HINDUISM

By Philip Spratt

Hindu civilisation is markedly different from any other. For some purposes, it can be treated as just old-fashioned or "mediaeval"; but these summary formulae are not specific enough for other purposes, and are no credit to our powers of understanding. Yet, after a century and a half of discussion, a satisfactory account of it is still wanting.

Owen Berkeley-Hill, who died in August 1944, was, I believe, the first to try the new line of approach provided by psycho-analysis. This does not, of course, give a final, exhaustive solution, but it does seem to help. Though his contribution was made twenty years ago, however, it has apparently been neglected, perhaps because what he said was extremely offensive to Hindus, who now do most of the work on this subject. Not being a Hindu, I can ignore his aspersions, and hope to see what is valuable in his ideas. This must be my excuse for venturing into print on so specialised a subject.

Berkeley-Hill pointed out (*International Journal of Psycho-Analysis*, Vol. II, 1921) that the group of characters, attributed by Freud, Ferenczi and Jones to highly developed anal-erotism, are typically displayed by Hindus, especially Brahmins, and in the teachings of the Hindu scriptures. Psycho-analysis is, of course, controversial, but I can only accept what these authorities say.

The theory of anal-erotism is that the child's emotional development is affected by the way it learns, in the first two years or so of life, to control the excretory function, and the attitude it develops towards excrement and towards cleaning itself. A fixation at this stage can lead to exaggerated attachment to personal cleanness—a "pollution

complex", and to the idea of self-control; and it can give rise to a fanatical sense of duty—what in a still more extreme form becomes a compulsion neurosis. The practice of retention leads to parsimony, and to orderliness and obstinacy, but, as usual in psycho-analysis, can give an opposite result, excessive generosity. There may be a concentration of emotion upon "giving out", as e. g. missiles; and upon handling the product, which can direct emotion into manipulation, manual skill and constructiveness. The product itself becomes the centre of emotions, negative and positive, which may attach to objects symbolised by it, of which there are many, and to objects associated with it, e. g. flatus, and hence sound, words, etc.

Berkeley-Hill argues that caste is more than anything else an expression of this "pollution complex". He quotes an account of an orthodox Brahmin's day—evacuation, bath, meal, etc.—and leaves one in little doubt. (It is odd that he does not mention cow-dung, panchagavya, sandal-paste or camphor). It is further characteristic of those subject to this obsession that they tend to be indifferent to their wider surroundings—furniture, house, etc. This is, of course, true of Hindus. Early marriage and the ban on the remarriage of widows he considers to derive from the same source. The desire for self-control similarly finds satisfaction in asceticism and the great range of yogic practices. The fanatical sense of duty and orderliness show themselves in the elaborate observance of daily life, still in some degree in force, and in the immensely elaborate ritualism described in the Brahmanas. The Hindu devotion to metaphysical subtleties and to law, and generally to elaborate logical constructions, is attributed to the same source. Parsimony is asserted to be characteristic of Hindus generally, but excessive generosity is also observed. Dubois remarks that fortunes seldom last beyond the second generation. The "giving out" complex Berkeley-Hill believes to be exhibited in the Holi festival, and in

caste-marks, and in marriage which is arranged and celebrated with a profuse interchange of presents. The manipulation complex is shown in the Hindu plastic arts, which are highly developed, and more conspicuously manipulative than anywhere else in the world except in pre-Columbian America. He speaks of the common European reaction to Hindu art: "An oppressive confusion of ornament, with an insensate distortion of the human figure." The ancient literary habit of playing with enormous numbers, yugas, manvantaras, etc., may show the same impulse. Hindus are conspicuously attached to two typical faeces symbols—gold and children; and he cites a legend, the birth of Ganesha from his mother's faeces, and also current magical practices, which go to confirm the reality of the association. He is especially interested in the Hindu flatus-complex, and gives many citations from the scriptures to support his argument. The syllable—*Om*, and many other magic formulae, *pranayama*, the theory of *sphota*, illustrate what he means. He gives impressive examples of Tantric practices showing both the manipulative impulse and the belief in the omnipotence of sound. He regards Hindu philosophy as a manifestation of this: "The flatus complex masquerading as a metaphysical spirit (Atman)—a 'divine afflatus', which permeated and breathed through all material things. This Atman received the name of Brahman (. . . from the root *brih*—to expand)". Finally, he cites a statement by Jones on the personal character-qualities which tend to predominate in the anal-erotic type: incapacity for happiness, irritability and bad temper, hypochondria, miserliness, meanness and pettiness, slow-mindedness and proneness to bore, the bent for tyrannising and dictating, and obstinacy. Even he does not say that this fits the Hindus completely; he only points out their incapacity for happiness, the tradition of irascibility among saints, and the difficulty modern Hindus notoriously find in cooperating among themselves, their

habit of tyrannising as shown in caste, and their historic, if not individual, obstinacy in preserving their peculiar culture for so long in adverse conditions.

The paper was written during the non-cooperation campaign, and here and there it is evident that Berkeley-Hill was getting his own back for the anti-British propaganda of the time—though his general attitude was not, I believe, a typically “imperialist” one. But it should not be dismissed as a mere attack upon Hindus and Hinduism. Individual character is immensely complex, and still more so is that of a culture; even if all he says was true, Hindus and Hinduism may have many admirable features, as of course they have. Moreover, even if he was biassed, that can affect only a few of his points; his case as a whole stands on its merits.

This brief summary is enough to suggest that it is a strong case. The array of evidence is impressive: a considerable number of characteristics of Hindus and Hinduism are brought together. So far as an outsider can judge, the psychological points made are sound. No other theory of caste lays stress on the fear of pollution as its psychological mainstay, though it seems clear that that is so. At least some psychological basis of the kind must be sought; it seems unlikely that merely arbitrary taboos could have maintained for thousands of years such irrational and inconvenient rules as those governing who may dine with whom. This is but one aspect, as the theory suggests, of a general restrictiveness—Hinduism is all restraint; it is not merely a matter of specific taboos. Hence the lack of enterprise, of adventure, of originality, and of enjoyment of life. Hindus are a depressed, joyless people.

Thus, though only an experienced anthropologist, who was also a psycho-analyst, could judge with confidence, I believe that Berkeley-Hill has found something true and important, which may go far to explain the peculiar character of the Hindu civilisation.

But having done so much, he leaves the argument half complete. Accept it that the Hindus of the upper castes are victims of this exaggerated anal-erotism ; how did they come to acquire this strange character ? These things do not just happen. Unless we get a plausible explanation of the establishment and perpetuation of the complex, we cannot be satisfied with it as an explanation of other things, and shall be inclined to doubt its reality.

Psycho-analytic theory says that the condition is typically due to premature, insistent or harsh attempts to educate the infant in regularity and cleanness. In these matters, however, it is usually stated that the condition may occur without any apparent stimulus of the sort. In short, we don't know enough about it. Unfortunately, that is the case in relation to Hinduism also. It would be pleasant if it could be shown that Hindus in general, and Brahmins in particular, had established a tradition of unusually early or insistent training of their children in cleanliness. My own casual inquiries and observations suggest that it may be true of Brahmins, but not of others. We certainly cannot rely on it as a fact.

However, the theory is vague at this important point, and we are free to speculate. The ideas and urges in question form a connected system, which will tend to be stimulated as a whole, if any one of its important constituents is stimulated even later in life. In particular, such a system may well be passed on from generation to generation by teaching and imitation. This is in accordance with the general ideas of psycho-analysis, and is supported by the phenomenon of regression, *i.e.*, the reappearance at a later stage of life of a group of characters which normally appear together at an earlier stage. In fact, the theory says that in this case regression, a turning back of interest to this stage, can be caused by sexual deprivation in late childhood. Both mechanisms — social transmission and regression—may, I think, have come into play.

However it was effected in the psycho-analytical sense, the adoption of such a peculiarity by a large community of men is most likely to have been due to contact with another culture; and in view of the antiquity of the phenomenon, the obvious assumption is that this culture contact was that resulting from the Aryan invasion.

Contrary to earlier beliefs, the view is now popular among orientalists that the Aryan invaders were at a lower cultural level than the more advanced of the indigenes. If Ehrenfels (*"Mother-Right in India"*) is to be believed, it was the Indus culture, with its manifest devotion to the bath, which confronted the Aryans on their entry into the country. In any case, it is a plausible assumption that the conquerors were soon made aware of their subjects' superiority in the matter of personal cleanness. As soon as political stability was established in any area, the new rulers would begin to feel this an impossible situation, and would try to make themselves and their children more presentable. It is just this sort of attempt which, according to the theory, gives rise to highly developed anal-erotism.

The feelings of inferiority and superiority are among the most powerful with which men are endowed, and in the course of history have been responsible for immense havoc. I do not think, therefore, that this speculation can be dismissed as frivolous. It is worth noticing that S. V. Karandikar makes a similar assumption, and attributes to this kind of striving for social superiority very important effects. Writing of the same culture contact, he says: "...all aboriginal tribes had to submit to the moral yoke of the Brahmins. To achieve this, it was....necessary that the aborigines or the non-Aryans should be thoroughly impressed that the Aryan conqueror was their superior in every respect....The aboriginal tribes of India, Dravida or Adi-Dravida, were exogamous....If the Indo-Aryan aspired to impress the non-Aryan with his moral supremacy, it was imperative that he must show to the non-Aryan that in the

important social question of the selection of the bride, the Indo-Aryan was at least as great a puritan as the non-Aryan, if not more rigid than he....To flatter the tastes of the non-Aryans and to prove their social purity beyond any doubt, the new settlers adopted the general law of exogamy." (S. V. Karandikar, *Hindu Exogamy*, pp. 1712-2).

However, I do not think that this matter of cleanness alone would suffice as an explanation. What is likely to have been more important is the clash between the sexual and family customs of the two populations; not that over exogamy, on which the Aryans yielded, but the clash between their patriarchal system and the matriarchal institutions which, as Ehrenfels believes, were prevalent among the indigenes. On this point, the invaders were insistent, and tried, with at least superficial success almost everywhere, to enforce their views.

Ehrenfels has advanced a theory which, if it is substantiated, is a contribution of great importance for the understanding of Indian history, and I may be permitted to digress in order to state it in outline. Surveying the institutions of the Hindu and aboriginal communities of to-day, he finds many which he attributes to a former, now partially suppressed, matriarchal or mother-right order. It survives almost untouched among the ruling communities of Malabar. He conjectures then that, before the Aryan incursion, India was predominantly matriarchal. But the Aryans were sternly patriarchal, and unlike other matters, this was a point on which they were very unwilling to relax. Male pride is humbled by the matriarchal marriage, the husband's doubtful status and the wife's predominance in the home, and inheritance in the female line. Clearly, a conquering male group could not allow its members to be dominated by their indigenous wives in this way. Perhaps just as serious is the patriarchal male's demand for chastity in his wife, and the matriarchal female's unconcern. Here

indeed was a cultural conflict of sufficient intensity to leave a lasting mark on the Hindu mind and society; especially, as with the gradual Brahmanisation of the lower castes and tribes the same conflict will have been repeated and perpetuated. Hindu history is the history of the sex-war. Ehrenfels considers that this explains, what has yet received no other explanation, the notorious decline in the status of women after the Vedic period, the institutions of early marriage, religious devotion to the husband, *suttee*, the treatment of widows, the restraints upon women's freedom and education; and the survival, side by side with these, of signs of the opposite implication: traditions of freedom, equality and striking practical and business capacity of women, the frequent emergence of eminent women, the worship of goddesses, the quasi-worship of the mother in the home, and the like. The impression of two clashing and imperfectly reconciled traditions is certainly strong. Ehrenfels thinks this unresolved cultural tension has had its effect upon the Hindu mind, and may account in particular for its striking proneness to run to opposite extremes, as of luxury and asceticism, Harischandra-like truthfulness and petty deceit, self-abasement and self-assertion.

Ehrenfels provides what we want: this drive to suppress matriarchal usages must have given rise to a tremendous puritanical fervour (compare the Methodist missionaries in the South Sea islands) and in particular will have involved the sternest suppression of pre-marital sexual freedom, the sexual deprivation in late childhood which, the psycho-analysts assert, can lead to a regression to the anal stage. We can well believe that it was carried out with, and gave rise in the victims to, that astringent horror which has ever since been the Brahmin attitude towards the facts of life. "In this evil-smelling, consubstantial body", quotes Berkeley-Hill, "shuffled together out of bones, skin, sinews, marrow, flesh, seed, blood, mucus, tears, eye-gum,

dung, urine, gall and phlegm, how can we enjoy pleasure?" (*Maitrayi Upanishad*).

Unfortunately, this quotation brings us up against the difficulty of chronology. Berkeley-Hill says: "The Vedic religion, as epitomised in the *Samhitas*, does not afford such numerous examples of the part played at that epoch by anal-erotic impulses as we find in later manifestations of Hindu belief and practice." In fact, he quotes only one example, illustrating the "flatus-complex", from the *Samhitas*. But he finds much evidence in the later Vedic literature, the *Brahmanas* and the *Upanishads*, which must therefore have been produced after the supposed cultural clash developed, and this is of course the usual view. But on the other hand, much of the evidence of the high status of women in early times comes from the *Upanishads*. The difficulty is perhaps eased if we follow N. N. Ghosh (*Indo-Aryan Literature and Culture*), and assume that the *Upanishads* were the work of the *Vratyas*, a non-Aryan people,—not indeed as if all the *Upanishads* were written by these people, but as if the composition of these works took place under various influences and perhaps at different times. This is a question, however, which only experts can discuss.

If these generalisations are valid, they help a good deal in the understanding of Hinduism. They seem to explain that all-round self-restraint, withdrawal from the world, dislike of life, which is so pervasive a character of the Hindus, at least of the upper castes. It adds to, though it is doubtless not adequate to, the explanation of caste itself. It suggests a line of approach to that submissiveness which, combined with domineering, has always been characteristic of the Hindus, and has been of very great importance in their history.

These ideas suggest also the source of the Hindus' exceptional reverence for asceticism—again a highly important character. The element of self-control in

asceticism may be ascribed to anal-erotism ; the element of self-punishment may derive from the persistent matriarchal atmosphere within the home. There is reason to suspect that the tendency to self-punishment is favoured by the unbroken mother-fixation which is the common result of upbringing in this atmosphere. Mahatma Gandhi's conversion to asceticism seems to have been provoked by the death of his mother. A connection between asceticism and the mother-fixation is also suggested by the life of Ramakrishna Paramhansa. *Sanyas* may be an expression of the guilty feelings aroused by the desertion of the mother involved in marriage.

Asceticism is also, however, a social phenomenon. It is practised among primitive peoples all over the world for magical purposes, but usually only by individuals, priests and so forth. According to Briffault, it is only among the Jews that asceticism came to be regarded as morally virtuous, and to be widely practised ; and this was in part because of the exceptional series of misfortunes which the nation had to suffer. The tradition passed on to Christian Europe, and was taken up with great fervour by the emergent bourgeois classes in the Reformation period, probably for the same reason—that they felt themselves ill-used under the rigid feudal order. But this asceticism has beneficial effects for them ; it may account for the prodigious energy with which they proceeded to conquer the world for the few small countries in which this class first arose ; it certainly accounts for many other characteristics, good and bad, of the modern bourgeoisie.

In Hinduism also we have a whole class of men devoted in principle to asceticism, and as in these other cases, it springs from a social struggle. But here the class affected was for many centuries a dominant, if not ruling, class, certainly subject to no such frustration from an external cause as the bourgeoisie of mediaeval Europe, and its struggle was waged not mainly for material

advantages, but for subjective self-satisfaction and "moral" supremacy. Hence perhaps the fantastic nature of that asceticism, and perhaps also the unpractical, other-worldly bias of Hinduism; hence certainly the failure of its ascetic discipline to yield the practical worldly advantages which resulted from European asceticism. Hindu, at least Brahman, energies were diverted from practical to intellectual exertions, and as time went on, became increasingly abstract and barren. The decline of the ancient civilisation of Europe is now widely attributed to the snobbish divorce it effected between the head of the theorist and the hands of the practical man. Hindu India, imbued with the spirit of "don't touch", shows this divorce in a psychologically different, but perhaps even more extreme form. The gradual decline of Hinduism after its early brilliance is no doubt a complex phenomenon, but we may claim here to have found an important chain of causes, which underlay this strange and tragic self-strangulation of a culture. It may not be universally true that freedom is indivisible, but it proved to be so in this case. The ancient Hindus suppressed their women, and their descendants paid for it.

Berkeley-Hill suggests that his theory of anal-erotism may explain the antipathy which is felt by other peoples towards Hindus. It seems to be true that such antipathy is generally felt, and that it is directed towards the caste Hindus; the lower castes, even if primitive, are felt to be more human and companionable. This complex of slight oddities of character, centring round the fear of pollution and the impulse to hold back, the refusal to enjoy life, is just the kind of thing which would give rise to a personal distaste. The effect upon relations with the Muslims, and the British, may have been quite important.

This brings up the communal problem, on which I may add a note. Berkeley-Hill did not pursue the line of thought just referred to, though it obviously could be

elaborated. He did, however, treat the communal problem from different points of view in two other papers. In one of these, "*Hindu-Muslim Unity*" (*International Journal of Psycho-Analysis*, Vol. VI, 1925), he points out that the Hindu hostility towards the Muslims is over-determined, and so probably reinforced from unconscious sources. These he judges to be the Hindu feeling for the motherland, deriving from mother-worship, and their consequent horror at what they must feel to be her violation by the Muslims, and the reverence for the cow, deriving doubtless from an ancient taboo of the type associated with totemism, and the deep repulsion which the deliberately provocative ceremonial slaughter of cows by the Muslims has engendered.

In the other, "A Short Study of the Life and Character of Mohammad" (*International Journal of Psycho Analysis*, Vol. II, 1921), he points out an ambivalence in Mohammad's attitude towards his parents, which leads him to inculcate as his explicit doctrine an extreme form of respect for authority, but implicitly to incite men to revolt. It is this, Berkeley-Hill thinks, which accounts for the unique power of Islam to arouse the fanatical enthusiasm of its supporters, and their remarkable solidarity; and it accounts also for their strong impulse to dominate, and their intolerance of control by a non-Islamic power. Berkeley-Hill had seen this expressed in the Khilafat agitation, and we see it to-day in the Pakistan movement.

DIALECTICAL MATERIALISM

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Paradoxically enough, dialectical materialism is a philosophy which deeply concerns the economist as well as the physicist. The entire Russian plan of economic life, which no economist worth the name can afford to ignore nowadays in the course of his professional work, is merely part of a wider plan and, to quote the words of Macmurray, "is itself dictated by a philosophical theory which covers every aspect of life." (Foreword to the "*Moscow Dialogues*" by Hecker). This is the philosophy of dialectical materialism, which is being imbibed in Soviet Russia not only by students of philosophy, but also by engineers, doctors, chemists, teachers, in fact, by all who pass through the higher technical schools and institutes which correspond to universities elsewhere.

Dialectical materialism forms a common ground between physics and economics, and between philosophy and either of them. This is a shadowy borderland on which one must tread warily.

Dialectical materialism may be regarded as materialism grafted on Hegelian dialectics. Marx and Engels were steeped in Hegelian philosophy, and it would appear that materialism was the graft on Hegelian dialectics, which constituted the parent body. Dialectical materialism is a philosophical system in which the amalgamation of dialectics and materialism has been brought about in such a way that it is futile to distinguish between the graft and the parent tree; in fact, what emerges is altogether different from both Hegelianism and the traditional, mechanistic, materialism. Here we find a kind of transformation of which scientists are constantly aware in the course of their experiments: we observe inter-

penetration of opposites, the lesson which Marx and Engels learned from Hegelian dialectics and which was applied to the task of constructing a new philosophical system.

It is necessary first to grasp the elements of Hegelian dialectics. Originally, dialectics appeared in Greek thought in the form of an art of conversation or disputation, and it was vulgarly used "to trip up a speaker by showing that the implications of his statement were self-refuting". But to Plato, dialectics was the process of thinking "by which the dialectic conflict of ideas is resolved by definition, differentiation and re-definition until one ultimate, luminously self-evident, insight is reached in which the original conflict of ideas is harmonised." (Sidney Hook, *Towards an Understanding of Marx*, pp. 74-5). 'Definition', 'differentiation' and 'redefinition' are the basis of the Hegelian categories of thesis, antithesis and synthesis. The method of knowing truth through conflict of one-sided tendencies which correct one another has been a recognised method of argument and discussion in the Middle-Ages. But dialectics as an "adventitious art", as "a subjective see-saw of arguments pro and con", introduces "for its very wantonness confusion and a mere semblance of contradiction into definite notions" (Hegel). According to Hegel, in its true and proper character, however, dialectics "is the very nature and essence of everything predicated by mere understanding". When we 'reflect', it is a movement out, beyond the isolated predicate of a thing, and although it brings out its relativity, yet, in other respects, reflection leaves it its isolation. "But by dialectic is meant the indwelling tendency outwards by which the one-sidedness and limitation of the predicates of understanding is seen in its true light, and shown to be the negation of them. For anything to be finite is just to suppress itself and put itself aside."

The dialectical method of thought is diametrically

opposed to the metaphysical method of earlier French materialists. Engels has described the latter as in "the habit of observing natural objects and natural processes in their isolation, detached from the whole vast interconnection of things; and, therefore, not in their motion, but in their repose; not as essentially changing, but as fixed constants; not in their life, but in their death. To the metaphysician, things and their mental images, ideas, are isolated, to be considered one after the other apart from each other, rigid, fixed objects of investigation, given once for all. This metaphysical mode of outlook sooner or later always reaches a limit beyond which it becomes one-sided, limited, abstract." (*Anti-Duehring*, p. 153). In this connection, Plekhanov says that "the metaphysical method of French materialists is in the same relation to the dialectical method of German idealism as lower mathematics to higher." In lower mathematics, concepts are strictly limited and separated from one another: a polygon is a polygon, a circle is a circle. But the difference between the area of a true polygon inscribed in a circle and the area of this circle, can be made an arbitrarily small quantity if the number of the sides of the polygon is increased. So, the polygon can be examined in the process of its becoming a circle. Higher analysis takes this as its starting point. What is differential calculus, if it is not a system which deals with infinitely small quantities or which, to quote Hegel's words, has to do "with quantities which are in the process of disappearing, not before their disappearance, for then they would be finite quantities, and not after their disappearance, for then they would not exist"? (Plekhanov, *Essays*, pp. 170-1). Hegel thought that the dialectical method which is exemplified by mathematics has a universal range of applicability as an engine for the discovery of truth, since "there is an intermediate position between being and

non-being." For example, "at this moment the planet stands in this spot, but implicitly it has the possibility of being in another spot, and that possibility of being otherwise the planet brings into existence by moving." (Hegel). The new theory of development of the earth's crust and Darwin's theory of evolution reinforced the theoretical significance of Hegelian dialectics as a theory of change and development.

But as Marx and Engels have hastened to point out, Hegel's theory of the world as a changing process does not imply that nature makes no leaps, that change is not only quantitative, but also gradual, so that revolution is inconsistent with evolution. The following passage from Hegel, which Plekhanov quotes with approval in this connection, is highly significant as embodying a philosophical theory of revolution: "It is said, *natura non facit saltus* (nature makes no leaps); and ordinary imagination, when it has to conceive arisings or passings, thinks it has conceived them when it imagined them, as a gradual emergence or disappearance. But the changes of being were in general not only a transition of a magnitude into another, but a transition from the qualitative into the quantitative, and conversely, a process of becoming 'other' which breaks off gradually and is qualitatively other as against the preceding Determinate Being". Hegel explains that the notion of gradualness is based upon the idea that what arises is already, sensibly or otherwise, actually there, and is imperceptible on account of its smallness. Similarly, when anything is said to vanish gradually, it is imagined that Non-Being, or the other which takes its place, is also there, only it is not yet noticeable. But "to explain the appearance or disappearance of a given phenomenon by the gradualness of the transformation, is *absurdly tautological*, for it implies that we consider as having already appeared or disappeared that which is actually

in the course of appearing or disappearing". (*Logic*, pp. 313-14).

We can sum up the essence of Hegelian dialectics by saying (1) that the essence of everything finite is that it cancels itself and passes into its opposite. Every phenomenon itself contains the forces which give rise to its opposite. It is the nature of the phenomenon which determines the change ; (2) that gradual quantitative changes are finally transformed into qualitative differences, and the moments of transformation are the moments of leap, of interruption of graduality and continuity.

The logic of contradictions implicit in the Hegelian dialectics marked an important departure from traditional metaphysics. Kant had enunciated the principle that contradictions in the concepts of things were impossible and tried to reason them away. Hegel not only did not do so, but recognised contradiction as the dynamics of the cosmic and historical process. Contradictions can not only be *thought*, but they supply the *momentum* to the discovery of truth. It is, however, true that "the matter cannot *rest* with a contradiction through itself" (Hegel). Secondly, we must note that dialectical movement is not movement in a closed circle, but in a spiral which rises above its starting point. According to Hegel, the "Spirit", the "Idea", does not remain static, resting in the thesis. The thesis, the thought, is counterposing itself, dividing itself into its opposite thought. The conflict is reflected in the antithesis ; but in the process of conflict a third element is formed from the interpenetration of opposites, resulting in a synthesis. This synthesis is not a golden mean, a middle course, a compromise ; because the synthesis implies a qualitative difference. The new synthesis contains the germs of its own negation, its own internal contradictions, and thus the process continues without end in nature and history.

The crucial question which forces itself on our atten-

tion is what kind of determinism is implicit in Hegelian dialectics? What is the role of the individual in the historical process which is part of Hegel's world process? In trying to answer such questions, philosophers of the Age of Enlightenment were involved in antinomies which they could not really solve. Public opinion, they said, rules the world and creates its own social environment; but is not opinion determined by the quality of the environment, since man is the product of his environment? There was another antinomy: (1) legislation creates morals; (2) morals create legislation. These antinomies which agitated the minds of reformers and philosophers could not be solved, and the only intellectual approach that was possible was to point out a relation of reciprocity. It was the dialectical idealism of Hegel which succeeded in crossing the limits they could not cross. How? Hegel examined the relations of reciprocity, say, between morals and legislation, not as "directly given", but "as the moments of some third thing, of a higher thing which is a *conception*". He looked upon the Universe as an organic whole, "developing out of its *conception* of itself"; the "idea" or "spirit", according to him, is the demiurg (creator) of the real. But what is the significance of Hegel's "idea" in relation to both legislation and morals? The "idea" in this context appears to be nothing but the "spirit of the people". Here Hegel lapsed into mysticism, into something which Plekhanov characterises as "pale, immobile, supine abstraction, and, very far from being able to explain anything at all, humbly demands some explanation of itself". (*Essays*, p. 182).

It is at this point that Marx and Engels parted company with Hegel. But they adhered to Hegel's conception of the relation of the individual to the historical process. Hegel had built upon the theory that in history freedom (i. e. conscious actions of persons) becomes a necessity, and necessity, freedom. Thus, Hegel said "world history is progress in the consciousness of freedom—a progress which

we must understand in its necessity. In world history, thanks to men's actions, something different takes place from what they aimed at and what they achieved, what they immediately knew and wished for; they act in accordance with their interests, but at the same time bearing something else into action which is contained in these interests, but which is outside their consciousness and intention." It is clear from this remarkable passage that the clue to the explanation of historical events is not to be found in "public opinion", but in the laws of social dynamics which changes opinion in the same inevitable manner as forces determine the movement of heavenly bodies. Thus, according to Hegel and Schelling, it is the idea of necessity which underlies the actions of individuals; but the seemingly imponderable element, according to Marx and Engels, is neither the "state as an individual totality of which you cannot select any particular aspect" nor "spiritual forces", nor "the form of the entire moral and intellectual individuality" (phrases which are absolutely vague and abstract), but something which is rooted not in "idea" or "spirit", but in the matter, i. e. economic structure of society. I shall try to show, however, a little later, that, in Marxism, determinism has a distinctive character which the critics and sometimes even the best followers of Marx have failed to notice. Meanwhile, it is necessary to show how materialism was grafted on Hegelian dialectics, and dialectical idealism was eventually transformed into dialectical materialism.

As Robert Flint has observed, "Hegelianism, although the most elaborate of all idealistic systems, presents only the feeblest of barriers even to materialism". He explains how a materialist re-orientation of Hegelianism was clearly possible. "It is true that thought is placed by it (Hegelianism) before matter, and that matter is represented as a stage of the process of thought, but since the thought which is placed before matter is unconscious thought—

thought which is neither subject nor object, which is therefore not real thought—matter is still the first reality, the first actual existence, and the power in matter, the tendency in it to rise above itself, is the root and basis of spirit, subjective, objective and absolute.” The weakness of Hegelianism was particularly evident in the sphere of philosophy of history. As Karl Marx observed in his “Holy Family”, “Hegel is guilty of a double deficiency. He declares that philosophy is the existence of the absolute spirit, but at the same time refrains from recognising the real philosophising individual as absolute spirit ; secondly, it is only in appearance that he has history created by the absolute spirit as such. In fact, since the absolute spirit only becomes conscious in philosophy taken as creative spirit, his construction of history only exists in the consciousness, opinion and representation of the philosopher, in the speculative imagination.” Thus, Marx broke away from Hegelianism, and the essence of his philosophy is contained in the following famous passage : “My own dialectical method is not only fundamentally different from the Hegelian dialectical method, but is its direct opposite. For Hegel the thought process (which he actually transforms into an independent subject, giving to it the name of ‘idea’) is the demi-urge of the real and for him the real is only the outward manifestation of the idea. In my view, on the other hand, the idea is nothing other than the material, when it has been transposed and translated inside the human head.” (*Capital*, Vol. I, Preface).

But what sort of materialism did Marx find it necessary to adopt as the basis of his methodology ? Was it a swing from idealism to the opposite extreme ? Was it a conception of matter which is unthinkable and unknowable—“things-in-themselves”—matter “outside of experience”—a sort of mysticism of the opposite variety based on dualism of appearance and the “thing-in-itself” ?

I would venture to suggest that Marxian materialism, which is the result of interpenetration of opposites, viz., idea and matter, thought and being, has a particular stamp and bears traces of both Hegelian idealism and the contemporary materialist philosophy.

The materialist philosopher whose ideas can be directly traced in the philosophy of Marx and Engels is Ludwig Feuerbach. Feuerbach was a humanist who said: "God was my first thought; reason my second; and man, my third and last." Marx who was pre-eminently a humanist in the highest sense of the term, was naturally attracted to Feuerbach's philosophy. Taking man as his starting point, Feuerbach, however, thought that the controversy between matter and spirit turned upon the "human head" in a materialist sense, i.e. the nature of the matter out of which the brain is composed. This means that Feuerbach was, *par excellence*, a materialist. He declared that "the true relation between thought and being may be expressed as follows: being is the subject, and thought the predicate. Thought is conditioned by being, not being by thought. Being is conditioned by itself, has its basis in itself." According to Feuerbach, Hegel and the idealists in general suppressed the contradiction pointed out by Kant between thought and being by suppressing one of the constituent elements, viz., being. How? By saying that thought is also being, that thought is the subject and being is the predicate, that nature is also "postulated" by the idea. This is nothing more than translating in philosophical terms the theological idea that nature was created by God. Similarly, Kant's theory that the outer world receives its laws from reason instead of reason receiving its laws from the outer world, has theological associations. Idealism, according to Feuerbach, cannot establish the unity of being and thought; in fact, it destroys their unity. But how can there be such unity? Only when we do not start from the *ego*, but

from the 'I' and the "You". I am "I" for myself and "you" for another person. I am at the same time subject and object. But who am I? According to Feuerbach, I am not the abstract being, but a real being, my body considered as a whole, the real material being. "That which for me, subjectively, is a purely spiritual, immaterial, non-sensible action, is in itself, objectively, a material, sensible action." This is a clear departure from Spinoza (whom Feuerbach calls the Moses of modern rationalism and materialism), who started by recognising universal substance endowed with a material being which was presumed to be the substratum of all mind and matter, but ended by identifying God with Nature. From these ideas Feuerbach reached a fundamental conclusion which was assimilated by both Marx and Engels, viz. that the laws of being are also the laws of thought. I contemplate space and time only because I am myself a being that lives in time and space. It is in man that there can be unity of subject and object, of thought and being. They are united in him as in a subject-object. "I am and I think, solely as a subject-object," says Feuerbach.

Apart from humanism, the most characteristic feature of Feuerbach's materialism which influenced Marx and Engels was his insistence on the unity of subject and object and not their identity. Earlier metaphysicians, obsessed by the contradiction between thought and being, resolved it by a process which identified both. Unity of subject and object was an extremely fruitful idea which was worth pursuing. Marx struck out a new line of thought which was an important departure from Feuerbach's materialism. Let us hear what Marx says on his new discovery: "The main defect of materialism, Feuerbach's included, has hitherto been that it has only considered reality, the objective and sensible world, under the form of contemplation, not as concrete human activity, not as practical exercise, not subjectively." Marx differs from

traditional materialists in three respects. First, his materialism is dialectical, while earlier materialism was static, mechanical, or at its best rooted in unknowable being, or Holy Matter, as Bazarov puts it. Secondly, Marx held that, while consciousness is derivative, it cannot be reduced simply to matter in a mechanical way. To a large extent, Marx continued to be a Hegelian. Thirdly, it is the new theory of perception contained in the passage quoted, which distinguished Marx from contemporary philosophers. This aspect of Marxist philosophy requires careful consideration.

According to materialists, including Feuerbach, our *ego* cognises an object only by exposing itself to the action of that object. Marx said that our *ego* cognises an object by *reacting* upon it. Sensation precedes thought, no doubt; but what was crucial for Marx was that man is led to thought mainly by sensations which he experiences in the course of his own action on the external world. But is such action inevitable? Marx says "Yes". It is forced upon man by the struggle for existence. Thus, according to Marx, to apprehend one's environment is to act on it, and alter it at the same time. Knowledge is not conceived as passive reception of an impression, it is an activity influencing the object. As Russell says, "in Marx the test of all truth is practical. And since we change the object when we act upon it, the truth ceases to be static." (*Freedom and Organisation*, p. 223). Maurice Dobb makes a similar comment in even more emphatic language when he says, "precisely in acting upon the world, and hence changing it, is the world knowable, and only in this way; and all the questions of reality which have vexed philosophers, acquire meaning only in terms of the efficacy of concrete activities." (*On Marxism Today*, p. 20). But it is not that man merely acquires knowledge by acting upon his environment and changing it. "*By acting on nature outside himself, and changing it, man changes his own nature.*" (Marx, *Capital*, Vol. I). Here man is seen not as a self-

determined subject realising himself in action on external nature, but a man who is spurred to action by the struggle for existence and by changing nature through his action and reaction, as determined by natural necessity by the dialectical movement of history and nature—a unity seen as an *ensemble* of forces and factors acting and reacting on one another. But this natural necessity is not blind necessity which would lead man to fatalism. Here there is room for freedom which is based on knowledge. And what is knowledge except what is perceived through action and reaction, *i. e.* realisation of necessity in the perspective of “the vast interconnection of things” (Engels), and the dialectical movement of nature and society? Here we get a comprehensive view of reality in relation to man which deserves the earnest attention of all rational individuals.

Marx’s conception of the activity of human thought is philosophically idealistic. Marxism admits this kind of activity, because otherwise Marxism would land itself in fatalism. But it rejects idealism on the ground that idealism ignores the material conditions of intellectual activity. At the same time, Marxism rejects orthodox materialism which reduces thought to mere sensation. Curiously enough, Marx’s theory of perception has been misunderstood even by some of his modern followers. Lenin, for example, observes in his “Materialism and Empirio-Criticism”, that “sensations are copies, photographs, images and mirror-reflections of things.” (pp. 61-2). An anxiety to avoid the slightest taint of idealism often leads some of the Marxists to misrepresent Marx. If the mind enters as an active factor in the process of knowing conditioned by the nervous system and past history, it does not follow that mind becomes the creator of all existence, that there is lapse into rank idealism which means religion and God—a position which a Marxist would dread most.

Two other important deviations from Feuerbach's materialism characterise Marxism. First, Feuerbach misconceived Hegelian dialectics. He said: "The true dialectic is no wise a dialogue of the solitary thinker with himself." The Hegelian dialectics was nothing of the kind. Marx thought that it would be a mistake to throw away Hegel's dialectics, while rejecting his speculative philosophy. Secondly, the greatest weakness in Feuerbach's philosophy was his idealism in the domain of interpretation of the historical process. According to Feuerbach, the evolution of ideologies which have appeared in history is conditioned by the evolution of what he called "human essence", which can only be found in the "community", "in the unity of man with man". The emphasis on community and the unity of man with man was characteristic of Feuerbach's inherent humanism. Marx started from the idea of community consisting in human essence, and in his "Theses on Feuerbach" we find him defining human essence as the totality of social relations—a definition which is much more precise and has a more concrete content. We also find him inclined to the view that legal and political relations which, according to Hegel, constitute a totality of spiritual and other forces reflected in the state of civil society, cannot be explained by themselves, not even by the development of the human mind, but by the material conditions of production. "The anatomy of the civil society must be sought for in its economic structure." Here was a solution of a great problem which had worried social philosophers—a solution which was, as Plekhanov puts it, "not in terms of the arithmetic of social evolution, but in terms of its algebra. (*Fundamental Problems of Marxism*", p. 24). Marx defined a method or a way in which we must set to work to discover the causes of historical phenomena. Engels understood this when he said: "We want not so much crude results,

as study." The value of Marx's materialist conception of history is therefore primarily methodological. This aspect of Marxism, as Plekhanov rightly says, is missed by many Marxists as well as by their critics.

I shall briefly illustrate the Marxian method of sociological enquiry in action. The anatomy of civil society is revealed by its economic structure. But what determines the economic structure? In social production, men enter into definite productive relations with one another. The totality of such relations is the economic structure. These relations again depend upon the evolution of the productive forces of society, which again depend upon the geographical environment. Thus, we reach the bed-rock—geographical environment. But the influence of this factor upon man in society is a variable one. The evolution of the forces of production increases the power of man over nature and brings into existence a new relation of man to his environment. When the development of productive forces is such that the existing productive relations or property relations become an obstacle, there is revolutionary transformation. No society perishes unless there have been developed all the productive forces for which it has room; and new or higher productive forces never appear unless productive relations appropriate to them have matured within the womb of the old society. Here we have, as Plekhanov says, a pure materialist algebra of social evolution. There is reciprocal interaction between the economic system and the forces of production. Upon the economic foundation is reared up a whole structure of social and political relations and of appropriate feelings and ideas. But Marx recognises the reciprocal interaction of the economic and other social forces, between the foundation and the super-structure

It must be borne in mind in this connection that, while Marx emphasises the influence of natural environment upon the development of productive forces, he

clearly recognises the significance of the mechanical means of labour which correspond in human history (as opposed to natural history) to the organs which animals develop in the course of adaptation to their environment. Otherwise, he would not have said that "Economic epochs are distinguished not by the fact that production goes on, but by *how* production goes on, and by what *means* of labour." It is in this context that we can understand the Marxist theory that man by changing nature changes himself. Darwin says that man could not have reached his present position in nature without the use of hands which are so admirably adapted to act in obedience to his will. The necessity of action on nature in this case not only changed nature, but also profoundly changed our simian ancestors into what we call the human species. Similarly, Marx would say that it is the task of history to investigate the development of man's artificial organs and its influence not only upon the development of productive forces and productive relations, but also upon human nature itself. But it is obviously the task not only for the ordinary historian, but also for the scientist, the economist and the psychologist collaborating with one another.

A philosopher may object that the real antinomy is not between idealism and materialism. It is realism which should be opposed to idealism, and materialism should be opposed to spiritualism. The question of priority of the material universe as given by the experience expressed in action and practice rather than in meditation, has become a dead issue, and modern idealism may not be very far from dialectical materialism. Marxists resist such "reapproachment" very strongly. They refuse to acknowledge subtle distinctions. Reality to Marx has meaning only in terms of human activity. What result will a particular activity produce? This

is the practical question which concerns a Marxist. The attempt to obliterate distinctions is, to a Marxist, an example of "interpenetration of opposites"; but philosophy, in order to be dynamic, must be grounded on the conflict of opposites. Marxists would say that to describe Marxism as a "non-mechanical" and "realistic" philosophy, is to belittle the specific content of dialectical materialism. There are non-mechanical systems which are non-dialectical, and there are "realistic" systems which are only formally different from idealism. "Dialectical materialism is materialistic in so far as it defines the central problem of modern society as a material problem, and consequently insists that any philosophy which is conscious of its social reference must start at this point." (Macmurray). It is materialistic in so far as it is rooted in naturalism and has discarded the intellectual jumble of supernaturalism. Moreover, idealism and materialism represent ideologies which are fundamentally opposed by their effects upon action and practice. Revolutions spring from materialist philosophies; all reaction is rooted in idealist philosophies which breed fatalism, supine indifference and social inertia. To a Marxist, philosophies are essentially partisan, and cannot but be so. They fall in line with the social movements and take sides in the struggle. The ideological conflict must be kept sharp and clear. So, Marxism has no use for agnosticism and positivism which, though bringing in materialism by the backdoor, are reactionary concessions to idealism.

THE REALITY OF MATTER

BY M. N. ROY

The discoveries of Quantum Physics are supposed to have made the sensational revelation that the foundation of the physical world is not material, and that there is no causal connection between physical events. Without substance and causality, science cannot do anything. Therefore, physics seems to have built a world out of nothing. Has it really been deluding the world all this time? An examination of the results of physical research in the microcosmic world shows that the position is not so disconcerting.

Before proceeding to that examination, it will be useful to dwell a little longer on the iconoclastic achievements of the Theory of Relativity. Moreover, I am of the opinion that the physical principle of Relativity may turn out to be the key to all the secrets of nature, and as such may indicate an approach also to the problems of sub-atomic physics, which, for the moment, appear to be insoluble.

All the iconoclastic ideas, which are supposed to have pulled down the beautiful structure of classical physics, are developments of the following simple statement of observed facts: All motions are relative; bodies move relatively to one another. The speed of a body is measured in relation to another, which is supposed to be at rest. But there are no bodies in absolute rest. It is easy to see what an entirely different light is thrown on the concepts of time and space by this new discovery. Movement makes the idea of time conceivable. If movements are relative,

time cannot be absolute. On the other hand, time and space are co-related concepts. The revolution in one cannot leave the other unaffected.

But it was really not a revolution. Newton himself was aware of the fact that there are no bodies in absolute rest. He actually wrote: "It is possible that, in the remote regions of the fixed stars, or perhaps far beyond them, there may be some body absolutely at rest, but it is impossible to know, from the position of bodies to one another in our region, whether any of these do keep the same position to that remote body." Then he made the statement that "absolute rest cannot be determined from the position of bodies in our region."

It is clear from this that the dynamic view of the Universe, represented by the Theory of Relativity, would not flabberghast Newton, if he came back to life to-day. Because, he would see that since his time, following the trail blazed by himself, science has explored the farthest regions of the heaven, and found no body at absolute rest.

The impossibility of finding some body at absolute rest implies the impossibility to measure absolute velocity. The disappearance of absolute time is logically inevitable.

The Theory of Relativity is based on a conclusion drawn from the negative result of experiments to find a way of measuring the absolute velocity of bodies through space. It explains the negative result. It should be noticed that neither Newton nor Einstein denies the existence of absolute velocity; both find that it is impossible to discover it. The philosophical implication is epistemological, not ontological.

Newtonian dynamics, notwithstanding its absolute space and time, does not offer any standard for measuring absolute velocity. Newton had rejected the Cartesian all-pervading substance. His system was built on the molecular conception of matter. Matter-in-motion is its basic postulate.

The two simple laws of motion occupy the central place in Newtonian mechanics. The entire system does not know of anything in absolute rest. Thus, relativity of motion is inherent in the Newtonian system. But the metaphysical notion of the absolute still dominated thought, not only philosophical, but even scientific. (Newton personally was full of theological prejudices.) Therefore, the logical conclusions of his cosmological idea could not be clearly and consistently thought out. Physics had to go through a whole period of development, acquiring empirical evidence against the metaphysical absolutist view, before the relativist implication of Newtonian dynamics could become evident in the light of a greater, more concrete, knowledge of nature.

The idea of motion results from the change of distance between two bodies. I consider somebody moving away from me, when the distance between us increases. But the other person also has exactly the same experience as entitles him to conclude that I am moving and he is at rest. Since the idea of motion results from the increase of an intervening distance, and the other person also experiences the distance between us increasing, it will be perfectly legitimate for him to consider himself at rest, and me moving away. Such an assertion made by him cannot be refuted logically.

In the absence of any body at absolute rest, absolute velocity can never be measured. Motion is always relative ; and the concept of motion being inseparably associated with the idea of distance, distance must also be regarded in the light of relativity. The discovery that motion and distance are always relative called for a revolution in the concept of space and time. Because, these metaphysical categories enter our experience, and become objects of physical measurement, only in the tangible form of distance and motion. The Theory of Relativity solved all the problems raised by the negative result of the Michelson-

Morley experiment by introducing a new way of regarding space and time, showing that these are not independent entities, as conceived previously, but are woven inextricably in a background on which all physical phenomena occur. Philosophically, the fundamental achievement of the Theory of Relativity is to have brought about this revolution in the concepts of space and time.

Having revealed the imaginary nature of absolute time, and consequently of absolute space, the Theory of Relativity merges space and time into a four-dimensional continuum. The novel conception of Space-Time, apparently a combination of two qualitatively different entities, has naturally been very puzzling. It could be understood, however, from two points of view: geometrical and philosophical. But it can also be understood as a simple commonsense proposition. Here is the picture as presented by Sir James Jeans:

"If we are to study objective nature, we clearly need an objective framework, which shall be independent of the motion of our particular rocket through space. It is nothing more nor less than a four-dimensional space—the ordinary every day space of any individual, extended by the addition of a fourth dimension—the ordinary time of the same individual. When each man combines the space he has chosen with the corresponding time, the four-dimensional space he obtains will always be the same."

Our experience of time is dependent on the changes in the external and internal relations of a body; therefore, the inter-dependence of time and space is an empirical fact. They are not welded together arbitrarily, as a mathematical device. They are welded together in nature. To regard them as independent categories, in the sense that either of them can exist by itself, is a mathematical abstraction. Since space and time are always found mixed up together, whenever they enter our experience, to regard them as independent categories is obviously an arbitrary procedure.

The question is : How do these apparently distinct categories get so inextricably interwoven? Relativity physics answers the question, thus helping the solution of a problem which puzzled philosophy for ages.

Space and time are not categorical entities nor ultimate realities. They derive their very existence from a common source, which is ontologically antecedent to them both. They are functions of the physical existence. Hence, though apparently so very different, they are always inextricably mixed up, except in abstraction. Fundamentally, they represent the self-same physical reality—extension or extendedness of matter, geometrical and chronological, respectively. Space is the geometrical extension of matter, and time is its chronological extension.

It is difficult to grasp this new idea simply because our minds are habituated to move in an old rut. A little reflection is necessary to realise the remarkable simplicity and logical soundness of the new conception of Space-Time. Indeed, it is very surprising that, throughout the ages, philosophers should have managed to mystify something so obvious. Space was postulated as the receptacle of things, because the latter must be somewhere. The primitive logic of naïve commonsense made location antecedent to existence. Speculative philosophy could never outgrow the primitive logic of its infancy. But the fallacy is obvious.

If things must exist somewhere, space itself must also have a location. Otherwise, it cannot exist. Thus, the idea that existence is dependent on location leads to *regresso ad infinitum*. According to the very traditional definition of existence, space does not exist except as extension; but extension logically presupposes something extended. This idea about the structure of space is implicit in Euclidean geometry itself. A line is not the integration of the bits of space separating points, but of the points themselves; and a plane the sum total of a number of lines.

Consequently, space is constructed of points; it is the product of existence. The function of the point is to exist; existence, therefore, is antecedent to space.

The analysis is equally applicable to the concept of time. Duration also is conditional upon existence. The logic is self-evident. A thing must be, in order to become. The idea of time is born of the primitive experience of interval between events, which are changes in existence. Becoming is a string of events, constituting the life-history of a thing. Space is being, and time is becoming. More correctly, space is the measure of being, and time that of becoming. While pure being is logically conceivable, becoming always involves being. Thus, time can never exist independent of space. Nature has welded it together with space.

This simple analysis of the commonsense idea of space and time leads directly to the picture of a four-dimensional continuum. Being is three-dimensional. But the world is a process of becoming. Pure being, that is, eventless existence, is an abstraction. Becoming is four-dimensional, because it embraces existence and change—space and time. A process of becoming is a four-dimensional continuum. The world picture presented by the Theory of Relativity is a matter of commonsense and elementary logic. The traditional concepts of space and time were artificial and illogical. The march of knowledge has left them behind.

There is no paradox in the fact that our present knowledge of nature differs from that of the past. Any mental or physical picture of an object seen in a dim distance is discovered to be defective, in some respects erroneous, when it is regarded from a more advantageous position. The discrepancy between the defective and the more accurate picture of the object does not disprove the fact that both of them represent something that exists independent of the observer. It results from the conditions under which the object is observed. The variation of

knowledge does not affect the uniformity of the object of knowledge.

Columbus discovered America, and described it on his return. But other explorers, who followed him, found the New World more and more different. Columbus even did not know that he had discovered a New World. He believed to have reached India by a new route. Gradually, it was realised that a new world had been discovered, and the description of the New World became fuller and fuller, as more and more visitors went there, and saw more and more of it from various sides. The discrepancy between the report of Columbus and those made by subsequent visitors, also the divergence of the reports made by these latter, however, did not affect the fact that, in every case, the selfsame New World was described. America existed by itself. Its existence was not conditional upon the mind of a Columbus, who discovered it. The divergent descriptions were of America ; they were not fabrications of the minds of visitors. They depicted different pictures, because they saw diverse aspects of the selfsame country. What was discovered by Columbus was not the whole of America. His description of America covered only the coast line of an island near the vast continent which was still to be discovered. It took nearly two hundred years before the New World could be generally described, geographically. Even to-day, a physical description of the continent of America must be far from complete. Its total mineral wealth is still to be estimated. Columbus went in search of spices. Cortes opened up a rich source of silver ; coal and petroleum followed. Now vast deposits of radium have been discovered in the Arctic regions of Canada. The New World, as we know it to-day, is vastly different from the America discovered by Columbus. Yet, it is the same physical entity. The object of our knowledge is the same ; but our knowledge of it has gone on increasing, the more we have investigated it.

This analogy roughly applies to our knowledge of the physical world. There is no discrepancy between classical physical theories and the theories of new physics; they represent two different stages of the knowledge of nature, which yields more and more of her secrets, the farther we push our investigation. The apparent paradox disappears as soon as we get rid of the prejudice that, to be correct, knowledge must be perfect—absolute. The basic philosophical significance of the Theory of Relativity is that it helped us to get rid of the venerable prejudice, not through pure reason, but with the aid of experience.

* * * *

It is also not true that new physics, as represented by the Quantum Theory, has discarded the notion of substance. As a matter of fact, philosophically, it completes a task begun by the Theory of Relativity. It abolishes the notion of absoluteness regarding the remaining two categories, namely, substance and causality.

The Theory of Relativity reduces the entire cosmic scheme, including space, time, mass, motion, force, energy—to one single category. The ultimate units of that fundamental reality are conceived as “events”, instead of mass-points, in order to lay emphasis on its dynamic character. The world is not a static being; it is a process of becoming. Therefore, it should be interpreted in terms of “events”, that is, of changes in the state of its ultimate constituents. Only that way can we get a realistic picture of the cosmic scheme. Because “events” are dynamic physical magnitudes, intervals between them are spatial as well as temporal.

So long as physics and philosophy believed in absolute space and time, regarded these as ultimate categories, logically antecedent to being and becoming, the criterion for the reality of matter was simple location in space. Matter was conceived as minute particles of mass occupying dis-

crete positions in space, at given moments of time. Atomic physics has discovered that matter does not possess those properties—always in the absolute sense. The notion of simple location in space must be abandoned. From this, it is inferred by some philosophically minded scientists that the old concept of substance must be discarded: matter does not exist physically, because its ultimate units are not extended in space. That conclusion is inevitable if we hold on to the idea that existence is extension in space. The revolution in the concept of space, brought about by the Theory of Relativity, however, compels rejection of the old definition of existence. Matter does not exist in space. On the contrary, space is a function of matter.

Sub-atomic research has disclosed that matter is not constructed as classical physics hypothetically pictured it to be. The world of new physics is constructed out of a substance, in which the difference between gross matter (particles with spatio-temporal continuity) and energy disappears. The Theory of Relativity indicates mathematically that mass and energy are mutually convertible. That possibility was deduced from observed facts. Thus, the way to the abolition of dualism has been discovered. Matter has been found to be of electric nature; on the other hand, it has been discovered that electricity is composed of material particles.

The new knowledge about the sub-stratum of the world does not imply a denial of the reality of matter. The problem raised is about the structure of the ultimate substance. The concept of substance is affected by the revolution, in so far as it was identified with mass. Mass is a property of matter; but it is variable like all other properties. The absoluteness of mass disappears already in the Theory of Relativity. Energy is a form of matter, and matter is a vibratory substance. Atomic physics has reduced matter to energy. That does not mean a denial

of matter. No Quantum Physicist would deny the existence of atom or its constituents—electrons and protons. The revelation is that even electrons and protons are not the ultimate units of matter. But they are measurable entities, and no serious scientist maintains that measurable entities can emerge out of nothing.

Only a generation ago, physical reality of the atom was disputed. There was a "crisis" in physics at the turning of the century. That is an old story now. Atom has survived Mach's attack. To-day, electron has become the object of doubt. But atoms are composed of protons and electrons. If these latter are not material entities, the doubt about the physical reality of the atom will raise its head, and the whole magnificent system of atomic physics will look ridiculous—much ado about nothing. The "meta-physical" concept of substance remains the basis of physics. Only, it is no longer an *a priori* concept—of a hypothetical category. The present theory about the nature of the stuff of the world is based upon empirical knowledge. It is *a posteriori* established. The new conception of matter is only a refinement of the old conception.

The position has been depicted as follows by Professor Andrade of Cambridge in his book "The Mechanism of Nature" :

"The older conception of atom was good enough to explain the phenomena then considered, and we can still use it for certain simple problems ; but to explain the facts of radio-activity and of spectroscopy, we must introduce the newer features of the theory. The new theory is also better than the old, because it demands only two ultimate things from which atoms are supposed to be built up. The fewer entities we need to assume as fundamental, in order to explain things, the better our theory. We do not claim any finality for it : some new discovery may suddenly force us to modify our idea in many particulars, but the success of the present theory shows

that we shall probably have to retain many of the general features of the theory. It is an excellent working hypothesis, because it has shown us law where law was not hitherto discovered, and connection between different phenomena, where before we knew no connection. It has enabled us to arrange our known facts in a more convenient and logical way, and has led to the discovery of very interesting new facts. It is justified by its worth, but is not final. Science is a living thing, and living things develop."

Thus, the revolution in the concept of matter, brought about by the discoveries of Quantum Physics, does not mean that all established physical theories are upset, with the consequent downfall of the mechanistic-materialist philosophical notions associated with classical physics. The impending process is towards a higher synthesis of ideas. Matter is not an inert mass moved by a mysterious force. Matter and energy are the dual manifestations of substance, which enters our experience as these manifested forms. Being realises itself in becoming.

Clearly, physics is reverting to the idea of cosmic continuity, apparently disturbed by the discovery of Quantum phenomena. Continuity, assumed by classical physics, does not exist as pictured in Newtonian dynamics or by Maxwell's equations of electro-magnetism. Quantum phenomena prove this. But wave-mechanics - the prodigious progeny of the Quantum Theory - depicts continuity on a higher level. Wave-mechanics indicates the way to a final systematisation of our knowledge of the sub-atomic world into a theoretical system, in harmony with the other branch of new physics, namely, the Theory of Relativity.

Indeed, a rational explanation of the Quantum phenomena can be found only in an application of the principle of Relativity to the study of microcosmic events. Wave-mechanics represents that application. It is heading towards the point where the two aspects of the world of new

physics meet, and merge into each other. Eddington, of all, has confidently drawn this conclusion from the highly abstract mathematical researches of Dirac, one of the ablest of Quantum physicists.

At the end of the last century, it was discovered that atom was not the smallest particle of matter, as it had been assumed to be ever since the days of Dalton. It was discovered that an atom consisted of a nucleus, charged with positive electricity, and one or more negatively charged particles distributed around the nucleus. The negatively charged particles were called electrons. This theory, tentatively suggested by Professor Thompson of Cambridge, was substantiated during the following years by the discovery of radium, and the study of the phenomenon of radio-activity. That was the beginning of atomic physics.

A more accurate picture of the inside of the atom was presented to the world by Rutherford in 1911. His theory, subsequently elaborated by the famous Danish physicist Niels Bohr, is as follows: The inside of an atom is like a miniature solar system. The positively charged nucleus—proton—is situated in the centre, the electrons moving around it like the planets around the sun. Practically the entire mass of the atom is concentrated in the proton. Only a very tiny fraction of it is distributed among the electrons. Yet, in size, the electrons are thousand times larger than the protons, and move at a terrific speed, sometimes nearly approaching the velocity of light.

The almost imperceptible mass, coupled with a prodigious speed, in the beginning, made the impression that the electron was not a particle of matter. The impression produced "the crisis of physical theories" at the turning of the century. There was much talk about "dematerialisation of matter". But the impression was altogether unfounded, because Thompson himself had estimated the mass of an electron.

The incredibly small magnitudes of atomic physics are not the result of only abstract mathematical calculations. They have been verified experimentally. The fact of fundamental importance, which emerges from the biography of the electron, is that there is nothing immaterial about it. In his "Two Thousand Years of Science", Harvey-Gibson writes: "The relatively massive proton has been identified with the smallest known unit of positive electricity, and the light electron has similarly been shown to be the smallest unit of negative electricity. Yet, each are particles of matter, in the sense that they possess mass, and are subject to gravitation, and so, in its last analysis, matter is indistinguishable from electricity."

An electric current is a stream of electrons. This fact represents a great positive achievement of atomic physics. It conclusively settles an age-long, fundamental question of philosophy. Reduced to the unitary element of electricity, the materialness of the Universe does not disappear into a mystic nothingness. Because, electricity is a thing ; it exists physically.

If we are to look for the ultimate unit of "pure" matter (in the gross sense of the term), there is the neutron. Nature, after all, is not so niggardly as Eddington accuses her to be. She does not keep her secrets hidden in unfathomable mystery, so that man may never discover them. Whoever earnestly search for it are rewarded with real knowledge.

The inner core of the atomic nucleus is made up of neutrons, while the active protons form the outer shell. Then, there are the free electrons, moving in space around the nucleus. The ninety-two hitherto known chemical elements are combinations of their respective types of atoms varying in bulk and complexity. This large collection of microcosmic solar systems presents atomic physics with a problem which appears to defy human ingenuity. To

sort them out so as to establish some general principle of atomic mechanism was, of course, the first problem. Niels Bohr attacked the problem, and produced a plausible solution by 1913.

He described the inner mechanism of atom roughly as follows: Each free electron in an atom can move alternately in many orbits—circular or elliptical. But the number of these possible alternative orbits is definite in the case of each electron. When the normal condition of any atom is disturbed through the rise of temperature, the free electrons jump to higher and higher orbits, that is, to orbits farther and farther away from the nucleus. Conversely, the process of cooling down is marked by the fall of the electron to successively lower orbits. The motion of the electrons in their alternative orbits accords with the classical law of electro-dynamics. But the classical law cannot explain the jump from one orbit to another—upwards and downwards. Thus, there arose a new problem. There appeared to be a rift in the whole system of physical theories; the laws of atomic mechanism do not fully co-ordinate with the classical principle of electro-dynamics, governing the entire physical Universe. In this rift lies the root of the so-called new physics, which, with its principle of Uncertainty or Indeterminacy, set the scientific world agog.

The inside of an atom is not a subject of direct observation. Our knowledge of it is inferential. The inferences, however, are made from clear and accurate data gathered through spectrum analysis. In the hypothetical structure of Bohr's atom, the electron is a particle. Yet, the fact that it monopolised a whole series of orbits contained a clue indicating its real structure. It is a particle, and nevertheless somehow spreads over a whole orbit. A pure, honest, particle need not be so exclusive. If the electron was a pure particle, there would be nothing to prevent more than one from moving in

the same path. Refined spectrum analysis revealed the fact that, while in the upper orbits the electron behaved like a particle with a definite mass, moving strictly according to the classical electro-dynamic law, only jumping unconventionally, from time to time, the definiteness disappears in proportion as it falls to lower orbits, nearer the nucleus. The electron undergoes a metamorphosis from a particle, with a series of definite positions, to a sort of a line, the points composing which cannot be singled out.

The clue offered by the breakdown of Bohr's hypothesis is that in the lower orbits the electron does not behave like a particle. Following up this clue, De Broglie and Schroedinger established the theory of wave-mechanics, according to which the electron in the lower orbits is not a particle of matter with definite positions in space. The discovery that the ultimate constituent of matter does not have simple location in space, together with its corollary that therefore the speed of its motion cannot be measured in terms of time, is taken for the foundation of the opinion that physics has broken away from the principle of determinism, and has revealed the metaphysical origin of the physical world.

The foundation, however, is altogether imaginary. De Broglie showed that light simultaneously possessed the properties both of particles and waves. This was established theoretically, by mathematical analysis, as well as through experimental observation. The general principle to be derived from the new theory of light evidently is that physical properties, which were previously to be considered as mutually exclusive, are really associated throughout the Universe. The trail to this synthetic, unitary, view of the structure of matter had been blazed by the principle of relativity, which established the identity of matter and energy, and abolished the absoluteness of all concepts.

Having formulated the new synthetic theory of light,

De Broglie applied its general principle to the study of the structure of atom. He thought that the failure of Bohr's hypothesis to stand refined spectrum-analysis might be analogous to the failure of Newton's corpuscular theory of light: electrons might not be pure particles as postulated by Bohr.

Following up the new line of approach, Professor Schroedinger conceived the electrons not as tiny specks of matter, but as electric charge distributed around the nucleus of the atom. The microcosmic electric field was pictured by him as in a state of vibratory motion. On the foundation of that hypothesis, he formulated the theory of wave-mechanics. Any possible doubt in this connection was further dispelled by the fact (demonstrated by Schroedinger as well as by Professor Born of Goettingen, who also had been working on the problem independently) that the several theories about the structure of atom, formulated independently, all equally led to results as actually observed through spectrum analysis.

The fact is of conclusive philosophical significance. Such an unanimity of theories, all established independently, through more or less pure abstract reasoning, decisively dispels any possible doubt about the objective reality of the subject of their common concern. Our present knowledge about the ultimate constituents of the Universe may be uncertain; atomic mechanism may still be only a partially solved problem; the electron may not exist in space and move in time like a conventional particle of matter; the interior of atom may properly belong to the category of the unobservable; nevertheless, there cannot be any doubt about it that atomic physics deals with material realities which exist objectively, outside the mind of the physicist. Its theories are not the bridge over which one passes from the imaginary reality of the physical Universe to the real realities of the mental world. They do not prove that the roots

of things are to be traced into an incomprehensible region of unobservables, which are unknowables. The new physics does not analyse physical phenomena down to an ultimate constituent which is "mind stuff". In short, it does not flow into the unfathomable ocean of metaphysical speculation.

The sum and substance of the entire body of the theories of atomic physics is that ultimately matter possesses both the corpuscular and undulatory properties. Just as we are no longer surprised to find both the properties in light, so it will be with matter as a whole, before long. The deeper we penetrate into the structure of matter, into the foundation of the physical Universe, the more precise becomes our knowledge. The successive theories do not cancel each other. The fact that our past knowledge was defective does not prove that the present is unreliable ; that we are dealing with unknowables. On the contrary, it proves that objective realities, existing outside, independent of our mind, cannot be fitted into our traditional moulds of thought. The task of science is to know them as they really exist. Those accustomed to think in terms of absolute categories—a habit rooted in the background of religions and metaphysical culture—are bewildered by the new discovery, and are prone to make a mystery out of it. But conventional modes of thought ultimately break down under the impact of new knowledge. Our mind is moulded by our knowledge of nature. The discovery that nature knows no absolute categories will necessarily free our mind from conventional concepts, and teach it to think in terms of relativity.

The Quantum Theory teaches us to conceive light as a phenomenon corpuscular as well as undulatory. The principle of relativity abolishes the distinct concepts of space and time, and teaches us to visualise things in a four-dimensional continuum. The wave theory of matter, which is the product of the two, will similarly teach us to

approach the ultimate constituents of the Universe with a mind free from the concept of indivisible particles—a concept which dominated physics, so fruitfully, ever since the days of Democritos. Just as changes and readjustments in the theory of life do not abolish life, similarly, the impending revolution in the concept of matter does not abolish matter; does not merge physics into metaphysics.

By reducing the physical world to a dynamic, unitary sub-stratum, modern physical research finally solves the old philosophical problem of substance. It is now meaningless to distinguish the essence from its properties; to differentiate the reality from appearances. It was necessary to postulate an essence of things, when the diverse aspects of physical existence were still to be traced to a common foundation. That having been done, the notion of an invariant essence, distinct from changing properties, becomes superfluous.

Primordially, matter is not something which exists in space and changes in time. It is the *sole* existence. The existence of matter is realised in its transformation into multitudinous patterns. The concepts of space and time are derivative categories, representing respectively the geometrical and chronological functions of material existence. In the absence of matter, there will be neither space nor time. It is obviously absurd to make the reality of matter conditional upon its subservience to categories, the reality of which depends on the reality of matter itself.

The physical world exists. It is not to be constructed by the mind of man. It is there, to be studied, explained, known, understood. That is the function of science. Science has performed that function, and has not discovered the roots of physical reality vanishing into nothingness. It has not reduced matter to mind. It has proved the self-sufficiency of matter. Matter is an objective category. Self-sufficient objectivity is the ultimate reality. Therefore

matter is the only reality. It is ontologically real. Its epistemological reality logically follows.

Like substance, causality also remains in new physics. The application of the statistical method in the researches of atomic physics does not disprove causality. The degrees of the uncertainty of our knowledge are expressed in terms of probability. Criticism does not permit the surreptitious transfer of the uncertainty of our knowledge to the object of knowledge. The probability of a thing or event is proportional to our knowledge concerning it. The greater the knowledge, the greater the probability. When predictions, made as probabilities, all happen to turn out to be correct, it is no longer a matter of probability. In the utter absence of the element of uncertainty, associated with the conception of probability, the conception must disappear. But in the formal logical sense, it still persists even then on the strength of the argument that, the calculations being based not on exact knowledge, but on probability, one can never say for certain that the next prediction will not be wrong. From the point of view of this extravagance of pure empiricism, no scientific theory has unquestioned validity. We should always expect the next pot of water to freeze when placed on fire. The implication of the argument is that no theory is possible except on the basis of an absolute knowledge of all the possible phenomena to be embraced by the theory ; that we cannot know anything unless we know everything. As with the human faculty of cognition it is not possible to know everything all at once, this theory of knowledge leads straight to the doctrine of revelation : Truth can never be known, it is revealed.

The laws of being are laws of strict causality, whereas the laws of becoming are laws of probability. Becoming presupposes being ; therefore, statistical laws are based upon the assumption that the entities involved in a process are individually governed by strict causal laws. It would be impossible to work out any law of probability, except on

this assumption. A collective order cannot be founded upon chaotic individuals. If some individuals are found to defy the statistical law, that does not prove the failure of the strict laws of causality ; the logical inference to be made therefrom is that our observation has been faulty—the law has not been put to a correct test. On the other hand, the conception of a being, independent of becoming, is a purely abstract conception. Isolated or static being is a logical category. It has no physical reality. Therefore, in extreme cases, such as in the case of an isolated electron, strict law of causality may not be experimentally demonstrated. Nevertheless, it is logically incontestable.

By the very nature of its subject matter, wave-mechanics is bound to be statistical. It does not deal with isolated particles. It has reduced the ultimate constituents of nature to a state of collective becoming. Consequently, the law governing matter, deep down in the foundation of its structure, must be statistical. But when the law, discovered inferentially, is always borne out by facts observed in nature, and by experimental data, its accuracy cannot be doubted. Any uncertainty, then, becomes only a matter of formalist logic. The laws of wave-mechanics have been so verified. The difficulty arises only when a necessarily statistical law is tested by mathematical experiments with individual electrons as ideally isolated particles.

Determinism and probability are not mutually exclusive conceptions. On the contrary, a synthesis of the two enables us to have a truer picture of relations as they really exist in nature. Co-ordinated with the concept of probability, determinism loses its teleological connotation. On the other hand, statistical laws cannot have any validity if the principle of causality is totally denied. In short, probability is the dynamic view of determinism. Moreover, induction remains the rock-bottom of scientific research ; but a rigidly mechanical view of

determinism cannot be logically reconciled with induction. Probability is methodologically preferable. With this principle, scientific theories gain in purely logical validity, while causal connection remains empirically indisputable. When the number of entities entering in calculations is so very great as to be incalculable, almost approximating infinity, then there can be no absolute certainty about prediction. All the causal influences, even upon a particular event, cannot possibly be traced. In such a situation, determinism has to be interpreted in terms of probability. But determinism remains. The innumerable number of possibilities of a given situation are all determined. Even if the most improbable event happened, it would be causally determined.

There is no place for miracles in nature. The new physics does not let them into its world. One of the leading Quantum physicists, Professor Born of Goettingen, goes to the extent of suggesting that the foundation of the physical world may be regarded as a "field of probability". But he is decidedly of the opinion that the doctrine of probability in no way effects the basic principle of physical science that, whatever happens, is caused; something does not come out of nothing. He says that "it would be entirely wrong to proceed to introduce a belief in miracles into our view of nature."

Rejection of the idea of causality—that there are invariant relations in nature—will mean blasting the very foundation of science. For, the point of departure of all scientific enquiry is the belief that the universe is a law-governed system, and that these laws can be discovered, understood and quantitatively stated. As long as predictions can be made, and events happen approximately as predicted, the principle of physical determinism stands.

FREEDOM OF EXPRESSION

BY SUDHINDRANATH DATTA

Milton is no longer the god he used to be in my youth. Later iconoclasts have uncovered his feet of clay ; and modern prosodists have laboured to prove that even his noble verse is full of metrical lapses. He is acknowledged to have been a sanctimonious egotist ; and if the distinction Mr. Herbert Read draws between character and personality be valid, then, however much he might have possessed of the former, he shows total lack of the latter. His one aim in life was to excel ; and this ceaseless effort made him so deliberate in everything he did that his lyrics are exercises in rhetoric rather than expression of seemingly spontaneous rapture. Nevertheless, *Areopagitica*, for all its latinised diction and ulterior motivation, stated the case for a free press in undying terms ; and, while the plea has been repeated, reinforced with new arguments from time to time, the amplifications continue to distract the mind, without superceding Milton's advocacy.

But the problem was simple in his days, when the economic man had still to win general recognition. Then, though the Renaissance with its glorification of individual liberty was sufficiently advanced to have disrupted beyond repair the social integration of the Middle Ages, there was yet no question that values were eternal as well as spiritual. Virtue was still knowledge ; beauty had only to be disclosed to receive universal obeisance ; and, whereas absolute truth remained hidden behind an infinite regress, reason dispelled ignorance by degrees, bringing the final revelation nearer every day. Thus, to Milton who had identified himself with the progressive forces of Reformation, the need to unshackle the human mind seemed paramount ; and, because the Roman Church, as a centralised institution, considered excessive

wisdom inexpedient, he did not feel any contradiction in pleading simultaneously for the removal of censorship and persecution of the Catholics.

Fortunately, they were a dwindling minority in England where freedom of expression could continue to grow, even though they remained voiceless until they were so few in number that the swelling chorus could no longer be spoiled by their discordant note. But conditions are very different to-day. Our world is compartmental without being regionally self-sufficient or homogeneous ; and, while Nazidom has been destroyed at the cost of untold suffering, there is in Britain itself evidence of Hitler worship. As for France, within the same Government allegiance is divided between the Western and the Eastern blocs ; and this polarity is ubiquitous in Europe, as also a threat to the unity of all other continents. In the circumstances, a man must be considerably more tolerant than Milton, if he is to fight for freedom of expression ; and, should he be content with limited liberty, he would need God-like confidence in himself before he could enunciate his principle of exclusion.

For, arrogant as Milton was, he had the enviable advantage of belonging to the larger faction which very soon became an overwhelming majority ; and so, despite its partiality, his judgment, which he understandably mistook for the Categorical Imperative, promoted the greatest good of the greatest number. But the majority of to-day is a confused mass without any sense of mission ; and, however introspective one may be, one can see neither virtue nor truth within, whereas without there is such ugliness as the greatest of modern artists cannot transmute into beauty. Those who are honest and informed know their motives to be intrinsically base ; and the ignorant flock round the cynic who bends them to his ignoble will with noble words. Thus democracy is in decay ; and, even a Jeffersonian, like John Dewey, can suggest no better remedy than to recommend state control of propaganda. But as Professor Hayek has pointed

out in another context, partial regimentation is a self-defeating ideal ; and, unless spontaneous generation has become a biological reality in the meantime, a council of distinterested philosophers would be as difficult to form now as it was in Plato's age.

There is, however, an influential minority who are above such debilitating despair ; and they claim that Marxist analysis is the surest guide to the true and the good. Generalising from the empirically established parallelism between the body and the mind, they hold that spirit, whence values are supposed to emerge, is a reflection of matter ; and, translated into terms of history, this means that in any given society the manifold of production and distribution is the sole determinant of culture. For, in the words of Marx, the "realm of freedom" only begins where the material production proper ends ; and, whatever their social development and economic system, men must spend most of their energies in merely producing the goods and services they need in order to survive. In this "realm of necessity" no freedom is possible, unless manual labour is expended according to a rational plan, calculated to minimise the blind operation of economic forces ; and it follows that spiritual values are enjoyed in so far as escape is possible from what Defoe described as "the daily circulation of sorrow, living but to work and working but to live, as if daily bread were the only end of a wearisome life, and a wearisome life the only occasion of daily bread".

Since history is a record of the slow liberation of man from this vicious circle, they alone merit freedom, who hasten the historical process by their conscious effort and concerted will. Others retard progress for the sake of vested interests, and must be put out of the way to clear the goal of successive generations. Thus Communists are entitled to the maximum civil liberty in the capitalist world ; and yet, within the Communist order, capitalists have no right to corresponding privileges, because they represent reaction which

vainly tries to perpetuate a mentality based on an outmoded economy. Unfortunately, the only collective society we know is based, if we are to believe the Webbs, on the concept of duty, as distinct from rights ; and so its evidence cannot strengthen the Communist case which is considerably weakened by the opportunism of its advocates when confronted with a situation that defies their dogmas. Nor is their faith in dialectics as an universal process founded on verifiable data. On the contrary, the closer we look at the geological past, the clearer become the breaks in evolution ; and unspeculative prehistory is full of similar cataclysms which humanity survived at the cost of millennia of retrogression.

Nevertheless, the humanitarian appeal of the progressive fallacy is great ; and, whatever his ideological preoccupation, no man of good will can deny that the "realm of freedom", as now constituted, is a close preserve that excludes the toiling millions penned within the "realm of necessity". If spiritual values are to acquire general validity, leisure to contemplate them must be made available for the masses ; and that requires reorganisation of the forces of production and distribution to ensure economic equity. Thus a contingent connection is established between economic and spiritual values ; and yet to postulate a causal relation between them would be a serious mistake. Even an invariable sequence of matter and mind is not discoverable in society. For, in the last analysis, the psyche is the repository of residues whose beginnings antedate *homo sapiens* ; and our conscious behaviour, too, is frequently out of harmony with our environment, as, for instance, in an infantry attack on an entrenched enemy, when every reflex prompts us to seek cover and only our sense of duty keeps us going.

Moreover, the very same stimulus sets up contradictory responses in the group and its members ; and the whole purpose of education is to inhibit our personal sensibility

so that we can move from place to place and community to community, without exhausting ourselves in ceaseless adjustments. Conversely, we carry a minimum number of values within us ; and, unless we are coerced to do the opposite, we recognise certain archetypal patterns whenever they recur. In fact, it is this recurrence in experience, that imparts continuity to cultures ; and, since space and time are in eternal flux, there has to be some sort of subjective stability in order that communication can take place between men and men, generation and generation. It is, of course, difficult to separate this permanent factor within individuals from superimpositions of fashion and expediency ; and yet its presence is presupposed by the indisputable fact that throughout the ages our saints and heroes have been cast in the same mould. Though biographical variations particularise their personalities, materialist interpretation of their uniqueness is manifestly impossible ; and such failures of the Marxist method are not explained away by saying that economic forces drive classes, without affecting individuals.

In any case, freedom of expression is an individual need ; and, as a matter of history, economic inequality, instead of hampering self-consciousness, is often an aid to its development. This does not mean that the present maldistribution of wealth is justifiable ; nor is economic enslavement a myth, because certain souls are unafraid of want. But they are also unresponsive to censorship ; and, provided they have a message, they get it across, despite proscriptions and prohibitions. Indeed, the creative artist has always to overcome the recalcitrance of the material he works in ; and in order to express his experience, he has to transform the original medium, as well as curtail its sensory supports. For example, a descriptive writer is obliged to use legible words to represent visible colour occurring in a manifold of sensations that lends it overtone ; and a musician is even more circumscribed, since he

demands instantaneous response that must, at the same time, cohere in an abiding pattern. Besides, resolution of difficulties is the essence of creative activity ; and, where nature offers no impediments, the artist invents them, so that the feeling of triumphant release may not be denied him in the end.

The audience, however, enjoys no such advantage, and is seldom called upon to get round real opposition. In the capitalist order, his consumption is restricted by his capacity to pay ; and, within the collective dispensation, he has no opportunity of contact with nonconformists. There is no doubt about the iniquity of the former ; and, although the latter claims as its principle —to each according to his needs, in practice, the priorities are arranged by a central authority with very definite moral predilections. Thus the necessity of freedom is equally urgent in both systems ; and, even if the Communists are right in believing that the exercise of absolute power will not corrupt the dictatorship of the proletariat, which will cease the moment wealth has been equitably distributed, the uniformity they seek to impose upon society may not produce the best art. For, in Marx's view, "with a communist organisation of society the artist is not confined to the local and national seclusion which ensues solely from the division of labour ; nor is the individual confined to one specific art, so that he becomes exclusively a painter, a sculptor, etc....In a communist society, there are no painters but at most men who, among other things, also paint."

Those who would have us believe that Communism alone promotes the maximum individuation, should ponder on the above quotation ; and, as Marxists abominate solipscism, they must be congenital utopians, if they maintain that each man is a repository of every possible appetency and aptitude. At any rate, the evidence of materialist psychology is definitely against such an assumption ; and, though Pavlov obtained miraculous results from condition-

ing, he was too much of an empiricist to deny that temperamental differences are inexorable facts. Had things been otherwise, propaganda could have solved all our problems ; and, because it takes all sorts to make a world, even a coercive society does not last for ever. Besides, unless some people could do certain jobs with especial competence and expedition, not only would excellence have never appeared on earth but humanity could not have progressed at all for sheer lack of leisure ; and, while that does not mean that many must labour, so that a few may grow fat, it does imply that the common weal is best served by allowing full scope to the individual's innate potentialities.

Of course, a poet is all the better for taking an intelligent interest in politics ; and a complete personality commands a wide horizon. Yet a vocation for authorship is the only justification for a life-time of writing ; and, initial predilections apart, the freedom to choose subjects most congenial to oneself is the surest incentive to good art in large quantities. No doubt, there is danger in this, as in all other forms of liberty ; and we have learnt from bitter experience that those who are the least tolerant of any restraint when living in a democratic system, are the firmest supporters of rigid standardisation in totalitarian regimes. But rapture without risk is rarer than omelettes without eggs ; and the only insurance I can suggest is to make the life of reason available to every one. In other words, universal education must begin by inculcating the scientific attitude which consists in recognising that facts and their inter-relations constitute the whole of reality ; and this the child should be encouraged to discover for himself and not accept on the authority of his teachers.

At the same time, vigilance must be exercised to prevent science from taking the place of religion ; and, having in course of a century performed miracles,

encouraged mysteries and evolved a priestly hierarchy, science, since the advent of Einstein, has become abstruse enough to sound oracular. Hence the future is supposed to be its sole monopoly ; and so great is the reverence it inspires to-day that to deny it magical properties or to doubt that it possesses specifics against every imaginable malady is to invite excommunication. In any case, a determined attempt is afoot to turn science into an institution ; and many scientists seem quite ready to put up with complete regimentation of their researches and abstractions. That such an idea should find even partial acceptance shows how insidious is the appeal of totalitarianism ; and similar misconceptions about the function of science have helped to develop the anti-scientific attitude of certain intellectuals who claim that nothing short of a religious revival can save society from worse horrors than the atom bomb let loose on Hiroshima.

Obviously, these pessimists exaggerate ; and yet science, unlike religion, has no direct connection with ethics. Such moral implications as it has acquired in its progress have been due to the accidental fact that it has grown in conjunction with democracy ; and so the didacticism of the Communists is no less foreign to it than the diabolism of the Nazis. Thus, while scientists may feel justly proud of the burden of social service that has come to fall on them, they must always remember that intrinsically science is beyond good and evil ; and if they continue to seek knowledge for its own sake, only then, and not otherwise, will the world's debt to them ever increase. Its detachment is precisely what imparts the highest value to science ; and here again its affinity with democracy is great. For democracy, too, is non-authoritarian ; it respects tradition so long as experience is not denied thereby ; and rigid planning of its economic life may conceivably enhance its efficiency for the time being, but it cannot expect to remain alive by stifling individual enterprise indefinitely, any more than astronomy can afford

to neglect planetary aberrations, because accepted laws are rendered incoherent by them.

Indeed, both science and democracy are vowed to truth ; and truth, though ultimately immutable, is revealed to man, as Milton knew, in fits and starts which often contradict one another and invariably confuse. Therefore he must always keep an open mind, be willing to discard preconceptions when present facts demand a revision of his premature conclusions. This freedom to make and correct mistakes is the especial privilege of the scientific spirit ; and free societies would do well to promote it. No doubt, it would be misused now and again ; and a few scientists would be perverted enough to go on concocting gases progressively more poisonous than the last. Yet a real democracy should have no call to utilise such commodities ; and that, rather than regimentation, should subserve the social implications of science. For good is superior to evil and beauty to ugliness ; and, given a free choice, man prefers the former. Otherwise, conflicting opinions, instead of stimulating our ratiocinative process, would have reduced us to the status of Buridan's ass ; and, since Marx, despite his cynicism, was ever faithful to the dialectic of progress, his thesis that our consciousness is determined by our being must mean, as Mr. M. N. Roy maintains it does, that the individual comes before the group.*

*Based on a talk broadcast by the author from the Calcutta Station of All-India Radio.

EDITORIAL NOTES

Nothing in the world is an unmixed evil. Every event is justified by the very fact of its happening. The attempt to conceive of some value beyond good and evil may not be altogether a poetic fantasy of the morbid genius of a Nietzsche. It is doubtful whether historical events can be judged objectively without an amoral or supra-moral attitude. All historical events are historically necessary, and whatever is necessary is right. This Hegelian dictum cannot be easily dismissed consistently with the belief in historical determinism which, as Bernhard Shaw once remarked, has the rigour of the Providential Will. Therefore, it is idle to quarrel with historical events. On the other hand, it is not obligatory to take a thorough-going conformist, or fatalist, view. The conviction that man, under certain limitations, is the maker of his destiny, enables one to reject that view. The moral criterion of good or evil is irrelevant for judging the historical value of events.

In political language, imperialism has come to be a term of abuse. It is an unmixed evil—the curse of the modern world. Yet, hundred years ago, at the birth of modern imperialism, Marx characterised the British conquest of India as a revolutionary event. The facts and arguments with which he backed his opinion were not very accurate and quite sound. Nevertheless, Marx could not be called an apologist of imperialism even by his severest critics. Subsequent historians could reinforce the opinion of Marx with more convincing arguments. In any case, scientific historians could not share the facile view that Clive's forger laid down the foundation of the British Empire in India. The easy conquest of a vast country, with a large population, was determined by its previous history. It

was thanks to internal causes that India fell an easy victim to successive invaders. The invasions, being historically determined, could not be called evils overtaking the Indian people.

There is a story that, when Tipoo Sultan of Mysore was fighting against the British invaders, he received a message of sympathy and felicitation from revolutionary France. The story may or may not be true. But what is true is that the British conquest represented the bourgeois revolution in Europe reaching out to India. Therefore, Marx characterised it as a revolutionary event. But it was a revolution by proxy, so to say. The expansion of British trade and the establishment of British political power necessitated certain measures which were revolutionary in the destructive sense. In addition to those political, legal and administrative measures, there was another factor which potentially was of a more far-reaching revolutionary significance. It was the impact of ideas which had successfully challenged the authority of mediaevalism in Europe, and thus had operated as the spiritual driving force of the bourgeois revolution. At least an echo of those disruptive ideas reached India in the wake of the British conquest. Whether they would have found their way to India in any case, is a speculative question. The historical fact is that they did reach this country through the instrumentality of the British conquerors. The other fact, that those ideas representing the spirit of the modern times, did not find in India a receptive atmosphere, proves two things : firstly, that India by herself was not yet affected by the social fermentation out of which those ideas crystallised in Europe ; in other words, in the eighteenth century, India was socially more backward than contemporary Europe, and that fact was the immediate cause of the British conquest ; secondly, that as soon as Indian reaction to the British conquest expressed itself in race-consciousness, there developed an antagonism to the liberating message of the

European bourgeois revolution, because it reached India through foreign conquerors.

Originally a revolutionary event, the British conquest galvanised cultural reaction in India. The fortuitous contact with a new culture resulted in a conflict of cultures. Since the closing years of the nineteenth century, the national life of India, which pulsates only in a thin upper stratum of the people, has been motivated by a cultural conflict which, in its turn, expressed itself more and more strongly in race-consciousness. The natural hostility and even hatred for the British conquerors were directed against the so-called Western civilisation. Rationalist, anti-clerical, anti-religious, anti-authoritarian, secular, heterodox, generally iconoclastic ideas, which had impelled the European humanity to struggle out of the social and spiritual slavery of the Middle Ages, and are needed also in India for the same liberating purpose, were rejected as foreign to the "special genius" of the Indian people.

So violent did this natural reaction against a revolution by proxy, and very partial at that, grow in course of time, that a whole chapter in the history of modern India has almost been forgotten. Yet, any country may be proud of men such as a number of Indians who lived during that period of frustrated Renaissance. And if India will ever be really free, she will know how to honour the memory of those illustrious sons of hers, who bravely tried to blaze a new trail for the Indian people to come eventually out of the wilderness of mediaevalism.

Professor Phatak's article tells us something about one of the pioneers of a free India of the future. He is hardly known outside his native province, and even there he is maligned instead of being remembered with respect. But we hope that Professor Phatak's article will stimulate the spirit of enquiry in the scientific students of history. The iconoclastic spirit of the almost forgotten pioneers of the yet-to-come Indian Renaissance has to be revived and

cultivated if the Indian people are to be freed from the tradition of an authoritarian mentality which casts an ominous shadow on their future.

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If, actuated by the scientific spirit of enquiry, students of history would delve into the past of India, they are sure to be rewarded with unexpected knowledge. As a matter of fact, the history of India is still to be written. There are mythologies, legends, and chronological accounts of doubtful accuracy. They provide material for a real history, which has to be very largely reconstructed. There are many forgotten chapters. The earliest ones vanish in the twilight of remote antiquity. The roots of Indian culture, which appears to have defied time and claims validity at home and superiority abroad even to-day, are buried deep in the unrecorded antiquity. Epics and myths enable the diligent student to have a glimpse into the twilight. But to be fruitful, Indian historical research must be guided by the knowledge of modern science. Otherwise, it would be a groping in the dark.

Psycho-analysis has thrown a flood of light in the obscure corners of cultural history; and cultural history provides a reliable foundation for the reconstruction of the general history of a people. Anthropology and ethnology have discovered that stages of social evolution are related with specific cultural patterns. Psycho-analysis helps to trace these to primitive social customs.

Spratt's article in this issue discusses a theory set up by the application of psycho-analysis to some old Indian social customs which have left an indelible mark on the cultural history of the country. Although, by itself, Berkeley-Hill's theory may explain many "oddities", and his general observations about the Hindu attitude to life are correct, it does suffer from over-simplification. All orthodox psycho-analysts are prone that way. Pan-sexualism, for instance, is an

extravagance. Similarly, the notions of "fixation", "regression", etc., are of the order of dogma. In any case, Berkeley-Hill's theory about the origin of caste will need a good deal of elaboration before it can be accepted as a guide in the research of ancient social and cultural history.

Leaving aside the technical question of anal-erotic fixation or regression, it is indeed rather far-fetched, as well as over-simplification, to trace the origin of the caste system to "pollution-complex." In so far as it was an expression of cultural conflict between the conquering and the native races, the "complex" may have contributed to exclusive social behaviour. But the caste system was based on more "rational" social causes. The first division most probably was to establish the superiority of the conquering race. This inference can be reasonably made from the term *varna*. It was a colour distinction. The conquering race was fair and the natives dark.

The conquerors were comparatively few in number. From Central Asia, they came a long way over high mountains and through otherwise difficult country. Consequently, the number of women among them must have been very small. The danger of the conquerors losing their social distinction through inter-marriage with the native race was great. It was natural to seek protection in exclusiveness, backed up by taboos. But that must have been a losing battle; the flesh is weak. Inter-marriages did take place, though not socially sanctioned. The offspring of that undesired, though inevitable, mixture of races, most probably, were the original ancestors of intermediate castes. The conquerors could not afford further to weaken themselves numerically by disowning the offenders against the custom prohibiting inter-marriage with natives. On the contrary, by granting to the offspring of prohibited inter-racial marriages a higher social status in relation to the natives, the conquerors broadened their base.

That seems to be a more rational view about the

early development of the caste system, which was originally a colour distinction. Subsequently, division of labour may have led to further ramification of the system. At that stage, it was not a peculiarity of the Indian civilisation. Classes coinciding with castes are to be found in the antique and mediæval society in other parts of the world.

It is, of course, a notable fact that in India castes, representing division of labour in the antique social organisation, had many peculiarities. But it is not enough to describe those peculiarities. How did they happen? That is a problem of Indian history. Psycho-analysis may help, but cannot solve the problem, which is cultural and sociological. The psycho-analytical method of generalising peculiar characteristics observed in individual cases, and then dividing mankind into types, is of doubtful validity in social research, though it may be of some help in reconstructing cultural history. Having made that allowance it must, however, be emphasised that psycho-analysis should be satisfied with a limited scope—as a highly valuable contribution to medical science. It deals with psychopathological cases. Therefore, the result of its observations and experiments cannot be valid for a generalisation applicable to the problems of group or mass psychology. And solution of these problems is the task of cultural history. The whole world, after all, is not a madhouse, nor can human behaviour in general be treated as the subject for pathological study.

The discovery that human behaviour is determined by psychological (physiological, would be the more accurate term) operations below the level of consciousness, is the fundamental contribution of psycho-analysis to science. It has helped the solution of some of the most baffling problems of epistemology. The old concepts of instinct and intuition have been shorn of their mystic connotation. But this great revolutionary discovery belongs to psychology. —Distinct from psychology, psycho-analysis is an applied

science with a limited scope. All its theories which claim a wider application seem to be far-fetched, of the order of dogma. To build up elaborate theories about the anatomy and physiology of cultural history on the foundation of treating "type characteristics" as the elementary undefinable, is hardly a scientific method. The theory of "fixation", "regression", etc., only begs the vital question: how do those characteristics appear?

Having stated Berkeley-Hill's theory that caste originated in the characteristics of the anal-erotic type, and holding correctly that general deductions from the theory do explain certain very remarkable features of Hindu life, Spratt raises the fundamental scientific question about the causes of the "peculiarities" which Berkeley-Hill treats as simply given. He proceeds to suggest an answer which appears to be quite sound. His observations about matriarchy in ancient India and its tradition, which lingers even to-day, influencing cultural life, however, are valid independently of Berkeley-Hill's theory. Whatever may be the value of the theory of anal-erotics, and its validity in special cases, need not be disputed; it is not required to explain matriarchy.

Matriarchy also is not an Indian peculiarity. It existed in other parts of the world in the pre-patriarchal age, and can be found among primitive communities in the contemporary world. It seems that communism (promiscuity) in sexual relations survived for a time the growth of private property. It was not yet individual ownership. Fathership being uncertain, inheritance through the mother was a convenient way out of the difficulty. Moreover, primitive human communities struggling against the rigours of nature most probably had fewer female members. When they broke up into small groups, each of these may not have had more than one woman. Matriarchy thus laid down the foundation of the patriarchal family, which retained the tradition of group ownership. But under

certain circumstances, particularly when there were fewer women than men, matriarchy could easily become a firmly established social institution, and be the basis of distinctive cultural patterns. The demi-godly status of the mother in the Hindu family, long after the general social degradation of women, may be a relic of the defunct cultural pattern based on matriarchy. In India, the social degradation of the woman most probably commenced when the so-called Aryan conquerors began to take native females. Matriarchy lasted much longer in the farthest South of the country, where the conquerors did not reach. In the early Vedic age, women seem to have had a higher social status, because of their fewness, amongst the nomadic tribes which came from Central Asia. Later on, with increased supply, so to say, the social value of the woman went down generally.

It is also unnecessary to trace asceticism to anal-erotic characteristics. Asceticism is a social phenomenon which thrived much later than the matriarchal period. It also was not peculiar to India. It was rampant in Europe from the closing days of the pre-Christian era right up to the early Middle Ages. But it is not to be confounded with the puritanism of the rising European bourgeoisie. Asceticism was a rank growth on the ruins of the antique society and later of the Roman Empire. There is no evidence of mass asceticism in ancient India. Brahmins of the Vedic age were anything but ascetic. Asceticism appeared in the wake of Buddhism. The rise of Buddhism marked the end of Indian antiquity. It rose in the conditions of social dissolution, but could not inspire a successful revolution, because social forces necessary for the purpose were immature. The miscarriage of the revolution threw back the process of social evolution. Reaction galvanised decayed social institutions. Society got stratified and the caste system was given the form in which it came down to modern times. Cultural patterns became stereotyped.

That is why so many "oddities" and peculiarities still disfigure Hindu social life.

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Dr. Gangulee's paper is a scholarly exposition of a very abstruse subject. Most essays on dialectic materialism make the confusion worse confounded, because of the failure to realise that there are two sets of problems involved. Logic and philosophy are not distinguished, and then again, epistemology is treated as the whole of philosophy. Cosmology is altogether forgotten.

It has come to be believed that Marxism is a direct descendent of Hegelianism. The emphasis on the term dialectic makes this impression. The wrong belief is also due to the fact that controversy with the "Young Hegelians" figured prominently in the early philosophical writings of Marx, such as "The Holy Family", "The German Ideology", etc. It is generally ignored that the first philosophical work of Marx was a treatise on Epicurus. Already then he differed from the Newtonian natural philosophy, whose point of departure was the atomic hypothesis of Democritus. The latter had made some arbitrary assumptions (atoms with hooks) to make his hypothesis work. Epicurus tried to free ancient materialism from its fallacy. He held that the property to combine was inherent in the atoms. That was an idea pregnant with immense possibilities. Young Marx, while still a student, saw that, and outlined the fundamental principles of modern materialism before he got involved in the mystifying controversy over Hegelian logic. It should be noted that Hegel's dialectics and absolute idealism are two different subjects, although he jumbled them together frequently.

The pregnant idea of Epicurus eventually blossomed forth into Spinoza's conception of "soulful matter". The modern doctrine of "emergence" can also be traced to the Epicurean hypothesis which is the corner-stone of the

Marxian philosophy, as distinct from its logic and methodology. Philosophically, Marx is a descendent of Hegel in so far as the latter is a descendent of Spinoza. There was no philosophy for Marx to inherit from Hegel, who liquidated idealism by reducing the phenomenal world to an Absolute Being and declaring that Absolute Being was Non-Being. Logic was the only thing that could be rescued out of that magnificent ruin.

In defending Marxian materialism, its orthodox exponents take great pains to differentiate it from the "mechanical materialism" of the eighteenth century. This practice betrays a remarkable lack of historical sense. Philosophy has a history. Hegel's view that the history of philosophy is the history of the world, is not such an idealist extravagance as it appears to be. The history of philosophy is certainly a reliable guide in the study of history as a process of social evolution. Marx learned not only from Epicuros. His extraordinary sense of history enabled him to appreciate the contributions made to (materialist) philosophical thought by mediæval rationalism, which conceived the grand idea of a law-governed Universe, taken over by the pioneers of modern science. Even a theologian like Leibniz, and an idealist like Kant, unwittingly contributed immensely to the materialist philosophy, eventually elaborated by Marx. Holbach's "System of Nature" still remains the fundamental treatise on materialism. The relation between Diderot and Marx is closer than that between Marx and Hegel. For formulating his philosophical ideas, Marx was more indebted to scientists like Cabanis and Hartley than to Hegelian dialectics. He must have learned a good deal also from Bayle and Priestley.

The Hegelian heritage, indeed, is the weak spot of Marxism. The simplicity and scientific soundness of materialism are marred by making its validity conditional upon dialectics. Marx loaded his otherwise self-contained materialism with the Hegelian ballast, because in his earlier

days his epistemology was unsound. "The ideal is nothing other than the material, when it has been transferred and transplanted inside the human head." This naive theory of perception could not be maintained except with the help of the mysticism of Hegelian dialectics. It is not true that Marx put Hegelian logic on its head. On the contrary, he simply took it over, and called his philosophy dialectic materialism. If emphasis is laid on dialectics, then Marx never got over the Hegelian influence. In philosophy, Marx was the immediate descendent of Spinoza, whose precarious pan-spiritualism Hegel had taken over as the basis of his absolute idealism. If anybody was standing on his head, philosophically, to be placed in the normal position by Marx, it was Spinoza.

Feuerbach exclaimed: "Let us forget about the Absolute Idea; let us start an investigation with man and the world as we find them." That was a complete break with Hegelianism, and that was the starting point of Marxist philosophy, outlined subsequently in the Theses on Feuerbach. The humanist leitmotif of Marxism is indeed to be traced, beyond Feuerbach, to the abstract principles of social justice formulated by the romantic and evangelist philosophers of the French Revolution. The Hegelian tradition of Marxism, therefore, is only skin-deep; it does not go beyond methodology. The German metaphysical speculations, culminating in the Hegelian philosophy, had nothing in common with the French philosophical thought which inspired the Great Revolution, and was subsequently elaborated into the Historical Materialism of Marx. As a historian and propounder of a new philosophy of history, Marx belongs to the tradition of Vico and Michelet. The ancestry is to be traced through Taine and Renan. While Vico's aphorism, "Humanity creating itself", contained the germ of Historical Materialism, the following doctrine of Spinoza provided the guiding principle of Marxist philosophy: "Man is in nature, not as an empire in an empire, but as a part in a

whole, and the movements of the spiritual automaton, which is our being, are governed by laws to the same extent as those of the material world in which it is contained."

Later on, Marx corrected his epistemology. Thereafter, his philosophy could be freed from the handicap of Hegelian mysticism, called dialectics. But that did not happen because the earlier epistemological error of Marx somehow persisted in his philosophy. Even Lenin emphatically repeated that erroneous theory of perception.

The transformation of Hegel's dialectic idealism to dialectic materialism was not a mutation in the logical process. It is an error to lay emphasis on method. Hegel having liquidated idealist philosophy, Marx took over the thread of philosophical thought at the point where it had deviated into the blind-alley of idealism. Descartes marked the point of bifurcation. One line of thought ended in Hegel; the other, developed by the French Encyclopedists, the 18th century scientists and Spinoza, culminated in Marxism. Materialism, pure and simple, stands on its own legs, progressively reinforced by science, because it is the only philosophy possible. Otherwise, modern man must stand bewildered on the border-land of science and religion, postulating God, whatever may be the name or form, in any dark corner, either of the macrocosm or of the microcosm, which has not yet been penetrated by the light of scientific knowledge.

* * * *

Sudhin Datta's contribution came in at the last moment—too late to be fully commented upon with the care and attention it deserves. That will be done in the next issue. But we cannot resist the temptation of saying just a few words without unduly prolonging these Notes. Discussing what may be called the most fundamental principle of democratic culture, Datta in his provocative manner raises a whole host of controversial issues which,

though related directly or indirectly to the central theme, are by themselves of capital importance. Those issues, challengingly facing all the planners and architects of a new social order, have been joined in a number of books large enough to fill a library. Yet, we are far from a general agreement. Therefore, the need for the freedom of expression remains as paramount as ever. In that respect, there can be no two opinions amongst the intellectual leaders of our time, if we believe to be living still in the age of reason.

Nevertheless, it is unfortunately true that intellectual regimentation is attempted on the authority of a social philosophy which, exposing the inadequacy and even hollowness of freedom in bourgeois society, postulates new economic relations and political institutions as prerequisites for man coming to his own, having the fullest scope to yield the untold treasures of ethical, æsthetic and spiritual potentialities supposed to be latent in the highest zoological form. This remarkable contradiction between theory and practice appeals to pragmatic justification, and results from the failure to grasp Marxism as a philosophy which, as such, must be something much more comprehensive than the most elaborate social engineering.

The concluding passage of Marx's Theses on Feuerbach appears to encourage such a narrow view of his revolutionary philosophy: In the past, philosophers have only interpreted the world; now they must remake it. There is no reason to assume that, in order to play their new role, philosophers will cease to do so *as philosophers*.

Philosophy being the guardian of the freedom of human spirit, Marxist practice, even during the transition period, should not be guided by the Jesuitic belief that good cometh out of evil. It may not be altogether fantastic to hold that the Platonic conception of "Philosopher-Kings" might be lurking behind the Marxist idea of proletarian dictatorship. If the proletariat is to remake

the world, on the Marxist pattern, then it must be a brotherhood of philosophers. The "conscious vanguard" (party), at any rate, must approximate that ideal visualised in the passage quoted above. The remaking of the world must be undertaken by philosophers, not by ruthless politicians and their theoretical apologists. Otherwise, there does not seem to be any guarantee against Marxist social engineering defeating its own end.

If politically Marx, in the last analysis, was a Platonist, philosophically he never deviated from Humanism. What is the purpose of social revolution if not to set man free from all the bondages,—intellectual and spiritual as well as economic and political—which weighed him down through ages? It is difficult to see how the attempted regimentation of intellect and emotion, during the transition period, can be even pragmatically justified. The outrage against Humanism certainly cannot find any spiritual sanction in Marxism, if it is conceived as a philosophy.

BOOK REVIEWS

ORIGINAL SIN

THE CHILDREN OF LIGHT AND THE CHILDREN OF DARKNESS, by Reinhold Niebuhr, Publisher Nisbet & Co., London, 7/6.

A searching analysis of the concept of democracy and a valid criticism of its practice are until now vitiated by a vain search for a *via media* between the over-optimistic belief in the essential goodness of man and moral cynicism. Those who, ever since the Renaissance, were motivated with the belief in the essential goodness of man are called "the children of light"—a slightly altered form of the scriptural designation, "children of the world". But because of their optimism, they are called "the foolish children of light". The author thinks that the optimism which inspired the pioneers of the bourgeois democratic civilisation is unfounded. His political philosophy, admittedly based upon "religious and theological convictions", cannot get away from the Christian notion of "original sin". The central contention running through the book is that the selfishness of man makes liberal democracy impossible; on the other hand, the Marxist alternative is also rejected because of its materialist philosophy which encourages selfishness.

A book by Reinhold Niebuhr can always be read profitably. This one also is full of stimulating ideas, presented, though not expounded, often with brilliance. But they do not lead to anywhere. Indeed, there is a remarkable lack of co-ordination, even of coherence. There are sentences full of meaning, and some of them are beautifully composed. But several of them taken together, in the order they are written, seldom constitute a conceptual picture or lead to any logical conclusion.

For instance; "Man's capacity for justice makes

democracy possible ; but man's inclination to injustice makes democracy necessary." One may admire the beautiful epigram, and at the same time wonder what does it really mean. The first half of the sentence contradicts the basic contention of the book that it is an unfounded optimism, foolishness of the children of light, to assume that man is essentially good ; in the second half, the contention is reaffirmed. Democracy is possible because man is essentially good ; it is necessary because man is also bad. Does this double-barrelled proposition make any sense ?

There is a logical connection between the concepts of possibility and necessity. What is necessary is possible. This truism of scientific thought can be disputed only by the belief in miracle. But in the epigram quoted above, possibility and necessity are antithetically connected ; one is the result of the goodness of man, and the other, of his badness. This is not a fallacy of abstract logic. It results from a confusion about the notion of democracy, and the confusion, in its turn, is the consequence of a static view of the relation between the individual and the community—of man's position in the social organisation. Moreover, epigrams usually are logically fallacious. Therefore, the sober beauty of logical rigidity and discipline of thought is often absent in artistic literature.

The title of the book, which made Niebuhr famous, was also an epigram—"Moral Man and Immoral Society". In the present book, he expounds the opposite view : Society cannot be moral, because the individual is immoral (selfish). Evidently, the entire thought process of one of the most thoughtful writers of our time is confused. The confusion results from his conscious and wilful adherence to the Christian faith, which "finds the final clue to the meaning of life and history in the Christ, whose goodness is at once the virtue which man ought, but does not, achieve in history, and the revelation of a divine mercy which understands and resolves the perpetual contradictions in

which history is involved, even on the highest reaches of human achievements."

The teleological view that life has a meaning necessarily leads to these "religious and theological convictions" which admittedly constitute the foundation of Niebuhr's political philosophy. The roots of the immoral society are to be found in the original sin of man, and, being sinful of origin, man can never be moral—by his own efforts; even his highest achievements are revelation of divine mercy. The meaning of life presumably is to be the vehicle of that revelation. In other words, life realises itself in a standing miracle.

Why should it be assumed that life has a meaning? Biology does not permit any such assumption. Life is a physical phenomenon. One does not ask for the meaning of trees, clouds and so on and so forth. Life's endless and incalculable possibilities spring from the fathomless depths of the physical Universe. The greater and greater achievements of man represent unfolding of the possibilities of life. It is altogether superfluous to postulate a divine mercy to reveal itself in order to endow life with a meaning. The possibility, and therefore the necessity, of harmony in society flows from the fact that life pulsates in tune with the Cosmos—the magnificent order of the physical Universe. The possibility and necessity of democracy follow logically. There is an uninterrupted continuity in history. That is the process of the becoming of life; it is entirely different from meaning or purpose. One is a realistic dynamic concept; the other is imaginary and postulatory.

Liberal democracy and Marxist social democracy are not two alternative theories; much less are they antithetical. They mark two successive stages of the understanding of the relation between man and society. The only difference is that, while liberal democracy is a static view of the relation, Marxism regards the individual in the context of social dynamics. Therefore, the latter only represents

a closer, more realistic, view of the anatomy and physiology of social organisation, and as such can visualise the realisation of democracy to a greater extent. If Marxism could not be derived from the earlier currents of civilised thought, then its historical necessity and logical validity would be open to doubt. Every form of thought, however dynamic originally, tends towards orthodoxy and conventionalism. Marxism cannot claim immunity from the danger of degeneration. Constant critique of orthodox Marxism, therefore, is necessary if that body of thought is to enrich the spiritual equipment of mankind. But it is remarkable how learned men like Niebuhr, with a highly developed critical faculty, talk of Marxism as if his knowledge of the subject was very superficial.

“The sectarian Christianity of the sixteenth and seventeenth centuries, in which social revolt was combined with religious rebellion against Feudalism, laid the foundation for the property ethic which finally culminated in the Marxist theory. The Anabaptists of the continent and the Diggers of England were equalitarian and Communist.”

That is a woefully mistaken idea about the genesis of Marxism. The mistake goes to the incredible extent of confounding the Marxist anticipation of the abolition of private property with the moral indignation of Proudhon. The fact, on the contrary, is that Marx severely criticised Proudhon's view that “property is theft”, and held that the rise of private property was a necessary stage in the process of social evolution, and as such it served as a lever of progress. The fundamental fallacy of Niebuhr's critique of Marxism is the assumption that the latter proposes abolition of private property. Marxism makes no such proposition. It anticipates the disappearance of private property, in the course of further social evolution.

The fault in the Marxist perspective of the future is the failure to anticipate the inevitable evil consequences of dictatorship. But emphasis on dictatorship is rather

an interpolation than a cardinal principle of Marxism. In any case, it is wishful thinking to assume that there will be a perfect equilibrium of power on the other side of revolution.

Niebuhr's elaborate, but rather fragmentary, criticism of liberal democracy as well as of Marxism can be summarised in the old, familiar question: "Can human nature be changed?" His answer appears to be in the negative; by his own efforts, either individual or collective, man can never atone for the original sin--he can never outgrow selfishness. Therefore, secular democracy is not possible. Harmony of human relations can be brought about only by divine mercy, which gives meaning to life.

"It will be a long while before modern idealists will recognise that the profundities of the Christian faith, which they have disavowed, are indispensable resources for the historic tasks which lie before us.....The insistence of the Christian faith that the love of Christ is the final norm of human existence, must express itself socially in unwillingness to stop short of the whole human community in expressing our sense of moral responsibility for the life and welfare of others."

Again: "Divine power, whose resources are greater than those of man, and whose suffering love alone can overcome the corruptions of man's achievements without negating the significance of our striving, has the completion of all human efforts in its hand."

One may admire the fervour of these religious and theological convictions. The charm of the confession of faith may also have appeal to the aesthetic sense of the reader. But it is doubtful if many will share the conviction of the author, although he certainly pleads his case with a disarming frankness and appealing eloquence. Having once taken destiny in his own hand, the modern civilised man is not likely to surrender it to a divine power, the record of whose guardianship of human affairs does not inspire confidence.

CONTRIBUTION TO A THEORY OF HISTORY

THE HERO IN HISTORY, by Sidney Hook, Pub. Secker and Warburg, London.

The sub-title of the book is "A Study in Limitation and Possibility". The problem treated is the old problem of chance and necessity. In other words, it is a treatment of the baffling problem of the relation between individual and society. Graphically stated, the problem is which comes first, chicken or egg? Ever since philosophers abandoned the "Knight-errantry" of going after "the sterile virgin of the Final Cause", this eternal problem has lost its mysticism, like eternity itself. There is no final cause. The very concept is a negation of eternity, and this negation liquidates philosophy except as subservient to religion. Though still there are "philosophers" who cannot differentiate philosophy from religion, the fact is that philosophy originated when the spiritual thirst of man could not be quenched by religion.

Nevertheless, even modern philosophers, who would not explicitly accept the suzerainty of religion, have discussed furiously the problem which, in the last analysis, is no more serious than the question: which comes first—the chicken or the egg? The role of the hero or the greatman in history is only one of the various facets of the problem. Does man make history, or is he made by history? One need not be a Marxist or even a Spencerian to realise that essentially there is little difference between the two questions. Since history is a record of human activity (including thought) from time immemorial, it is clearly a creation of man. On the other hand, it is equally clear that the possibilities of any single individual are created as well as limited by the doings of others in the past as well as in the present. All confusion and unnecessary controversy result from the time-honoured habit of conceiving the individual as an abstract entity. Such an individual is not an objective reality any more than the atom of classical physics. The individual's relation to society is not like that of God to the

world created by himself. Every individual contributes to the creation of the social world in which he lives, and as such could be called its creator ; but at the same time he is bound by the laws of that world. Man's relation to the world, therefore, is more rational than that of God to his creation. He is in it and also of it. The position was described graphically by the fundamental principle of Vico's "Scienza Nuova"—"Humanity creating itself". Very little original has since been contributed to the discussion of the problem of man's place in history.

If the individual is seen in this realistic setting, then it is evident that every biologically fully developed man or woman is potentially capable of playing the role of the hero or the greatman, provided that he or she happens to be in a favourable combination of circumstances, and these latter may sometimes appear as fortuitous, but in the last analysis are determined. Accidents are not uncaused events, and heroes and greatmen are not accidents. They are "accidents" in so far as they demonstrate the general sociological law that man is made by history and, to that extent, limited by social environments, past and present, but, at the same time, can have the possibility of influencing the march of history.

Sidney Hook, in the book under review, appears to take this view of the hero's place in history. But reading the book carefully, one cannot be very sure. The ambiguity results from an analysis which primarily "aims at a fruitful formulation of this fascinating problem". It is difficult to agree that a *reductio ad absurdum*, like the chicken and the egg, can be fascinating even as a sterile intellectual gymnastics. Unfortunately, of late, Sidney Hook has tended to treat philosophical problems in that manner. Perhaps he is trying to construct a new system. But until now he appears to be only groping—in the wilderness of modern scholasticism.

In this book, Sidney Hook rejects both the teleological and determinist view of history. Nor does he share

Carlyle's belief that all factors in history, save greatmen, are inconsequential. He criticises the Spencerians, Hegelians and Marxists for having "overlooked a possible position which was not merely an intermediate one between two over-simplified contraries, but which sought to apply one of Darwin's key concepts to the problem, namely, variation. According to this view, the greatmen were thrown up by "chance" in the process of natural variation, while the social environment served as a selective agency in providing them with opportunities to get their work done."

To hold that this "intermediate" view is very much different from the Marxist view is only hair-splitting—making a confusion worse confounded. The only difference is that Marxism would not accept "chance" as an elementary undefinable of history. The concept of "chance" in history is no more mysterious than that of "the field of probability" in atomic physics. The statistical method is even more appropriate to social science if any appreciable degree of exactitude is to be obtained. The above quotation does not mean anything more or less than that the unlimited possibilities in a biologically fully developed human being unfold themselves *extraordinarily* in a favourable combination of circumstances. That is how heroes appear on the stage of history. The favourable combination of circumstances is not created by the hero or the greatman ; the stage is set for him by other agencies, also human, over which he has no control. But the stage set for him gives him the opportunity to make future history.

In the introduction Hook modestly writes : "We are offering not a theory of history, but a contribution to a theory of history." Reading through the whole book, one is left wondering which theory Hook is contributing to. In one place, he appears to accept William James' restatement of Carlyle's doctrine, "free from its fantasy", as "sound enough". James talked of "the receptivities of the moment", "relative anatomy of the realm of nature"

and "plurality of historical causes". Hook believes that these fashionable phrases carry us "to the heart of the problem". The first phrase is another name for a favourable combination of circumstances. The second represents learnedness which takes delight in mystifying the ordinary mortal. In any case, the anatomy of physical nature has only an indirect bearing upon the physiology of society. Finally, no historian, who treats his subject as a science, disputes that every historical event is brought about by a plurality of causes.

So, Hook soon discovers that James was saying the same thing as Carlyle, instead of "mitigating the severity of his fantasy". Here is the eye-opener. In his essay on "Great Men and Their Environments", James wrote :

"The mutations of societies from generation to generation are in the main due directly or indirectly to the acts or examples of individuals whose genius was so adapted to the receptivities of the moment, or whose accidental position of authority was so critical that they became ferments, initiators of movements, setters of precedent or fashion, centres of corruption, or destroyers of other persons whose gifts, had they had free play, would have led society in another direction."

The concluding paragraph of the book makes the impression that Hook's contribution is to the theory of history which holds that heroes or greatmen are not *sui generis*, but contingent social phenomena. In any case, he warns against "event-making man" or "an uncontrolled elite" who claims, and is credited with, a sort of an immaculate social inception.

Since Carlyle wrote his poetic treatise, the modern world became too prosaic to manufacture heroes and applaud them strutting on the stage of history. There were greatmen, not heroes ; and their greatness was so genuinely great as did not require dramatisation.

"In our own time interest in the words and acts of outstanding individuals has flared up to a point never reached before. The special reasons for this passionate concern in the ideas and deeds of

the uncrowned heroes of our age are quite apparent. During a period of wars and revolutions, the fate of peoples seems to hang visibly on what one person, perhaps a few, decide."

This significant fact stimulated Hook's study of a phenomenon which appears in an atmosphere of cultural backwardness or cultural degeneration. His description of how "heroes" (not greatmen) *are made* in our time is very vivid :

"To-day, more than ever before, *belief* in 'the hero' is a synthetic product. Whoever controls the microphones and printing presses can make or unmake belief overnight. If greatness be defined in terms of popular acclaim, as some hasty writers have suggested, then it may be thrust upon the modern dictator. But if it is not thrust upon him, he can easily arrange for it....

"The modern leader or dictator has emerged in a period of mass movements. In consequence he must have a mass base of support and belief as a counterweight to other mass movements. Mass belief in him before he reaches power is born of despair out of need, and nurtured by unlimited promises. Once he takes the reins, the dictator needs some mass support to consolidate his power. After that he can manufacture popular belief in his divinely ordained or historically determined mission almost at will."

The hero therefore is a "scourge of God", unless he is a martyr. The relation between pathos and what is called heroism has never been clearly defined. Indeed, what is heroism? In any case, it is an error to confound the greatman with the hero. The latter is usually raised above the human level and regarded as a demi-god. The greatest of the greatmen never claim to be anything more than a man. They are neither "inspired" nor "possessed". Not a few of them miss the limelight of popularity.

While heroes are created by base human machinations or *post factum* (in legends or epics), greatmen are the products

of social dynamics. Unforeseen combinations of circumstances cause mutations in the process of social evolution. Greatmen are parts of those circumstances. Therefore it is irrelevant to ask, for example, the question whether the Russian Revolution could succeed without Lenin's leadership. Lenin's leadership went into the combination of circumstances which were conducive to the success of the Russian Revolution. Whether Napoleon or any other greatman could have acted differently is a purely speculative question. The fact is that they did not, and history should only explain that fact. The attempt to think out all the possibilities of a given situation is useful for the future and partially for the present, if the logically fallacious concept of present is at all admitted. In understanding the past, such attempt is utterly useless—idle speculation. History is the record of what has actually happened ; to speculate what might have happened is not the task of the historian. Many things might have happened, but did not. Only certain things did. To describe and explain them is the task of history. So long as historians apply themselves to this task with scientific precision and rigidity, heroes and greatmen cease to be enigmas. They can be fitted into the scheme of history as subject to its laws.

Michelet, for instance, wrote :

"...the people were usually more important than the leaders...It is quite wrong to take these brilliant and powerful talkers, who expressed the thought of the masses, for the sole actors in the drama. They were given the impulse by others much more than they gave it themselves. The principal actor is the people. To find the people again and put it back in its proper role, I have been obliged to reduce to their proportions the ambitious marionettes whose strings it manipulated and in whom hitherto we have looked for and thought to see the secret play of History." ("History of Revolution")

AN USEFUL HANDBOOK

MATERIALISM, MARXISM, DETERMINISM AND DIALECTICS, by Prof. B. N. Dasgupta, Pub. The Indian Press Ltd., Allahabad, 1945.

The title of the book promises a voluminous work. But Prof. Dasgupta has succeeded in compressing a vast amount of learning and information in a very useful handbook of 122 pages. The subjects treated in so many chapters of the book are mentioned in its title. Many books have been written on each of the subjects, and many more can be, without exhausting them. The merit of Prof. Dasgupta's work is that he gives a very concise, but clear—though not exhaustive, statement of what may be said in favour of each of the subjects. Indeed, the book is a collection of four tracts which could be published separately. Since the subjects are allied, the four tracts hang together well as one book, which evidently is written with the purpose of showing the different facets of a philosophy and coordinating them in a synthesis. That purpose would have been served better by a comprehensive treatise either on Materialism or Marxism. Nevertheless, this methodological defect does not in the least minimise the merit of the work.

The brief account of the various currents of heterodox thought in ancient India, given in the first chapter, affords a glimpse into the richness of India's cultural heritage, and shows that what to-day passes as Hindu philosophy ignores important chapters of her intellectual history. Those forgotten or suppressed chapters are still to be rewritten, and it may be hoped that Prof. Dasgupta's study would be an incentive in that direction. But, unfortunately, he does not seem to believe that those hidden treasures can be recovered. He is content to note that the almost lost materialist philosophy of ancient India had a great similarity with Marxism. More exacting readers would

share the hope expressed by J. B. S. Haldane, who has contributed a short foreword to the book, namely :

"I hope that Mr. Dasgupta will find time to write a much larger book in which he will not only trace the relation of Marxism to Indian thought in greater detail, but make what may be a fundamental contribution to history by showing how changing social conditions have influenced the movement of thought in India. Kapila, Gautama, Samkara Acharya, and other great Indian thinkers were not isolated individuals. They were the finest products of great societies, and we can only understand them by understanding these societies."

Prof. Dasgupta has time and again deprecated "pure thought"; but he has attempted a history of thought with absolutely no reference to the social background. Therefore, his generally correct statement of ancient Indian materialism is not altogether free from flaws. For instance, he is of the opinion that the Samkhya system came nearer to modern Materialism than the Naya-Vaisheshika system, which provided the philosophical motivation for the Buddhist revolution. As a matter of fact, in the last analysis, Kapila's philosophy was rather idealistic. Its historical merit is that it anticipated the Cartesian doctrine "Cogito, ergo sum", which is the foundation of classical idealism. Kapila was agnostic. Others, like Charvaka, were atheists. On the other hand, Naya-Vaisheshika not only started with a materialist cosmology, but even conceived the idea of "emergence". That is to say, it approximated dialectical materialism (Marxism) more than the agnostic and atheistic systems of ancient India.

But while expounding Marxism, Prof. Dasgupta writes that "Marxism may be called indeterministic" only when it admits emergence. Hence, perhaps unwittingly, he gives away his whole case. Only the concept of emergence makes of dialectics anything different from Hegelian mystification and puts some meaning in the scholasticism

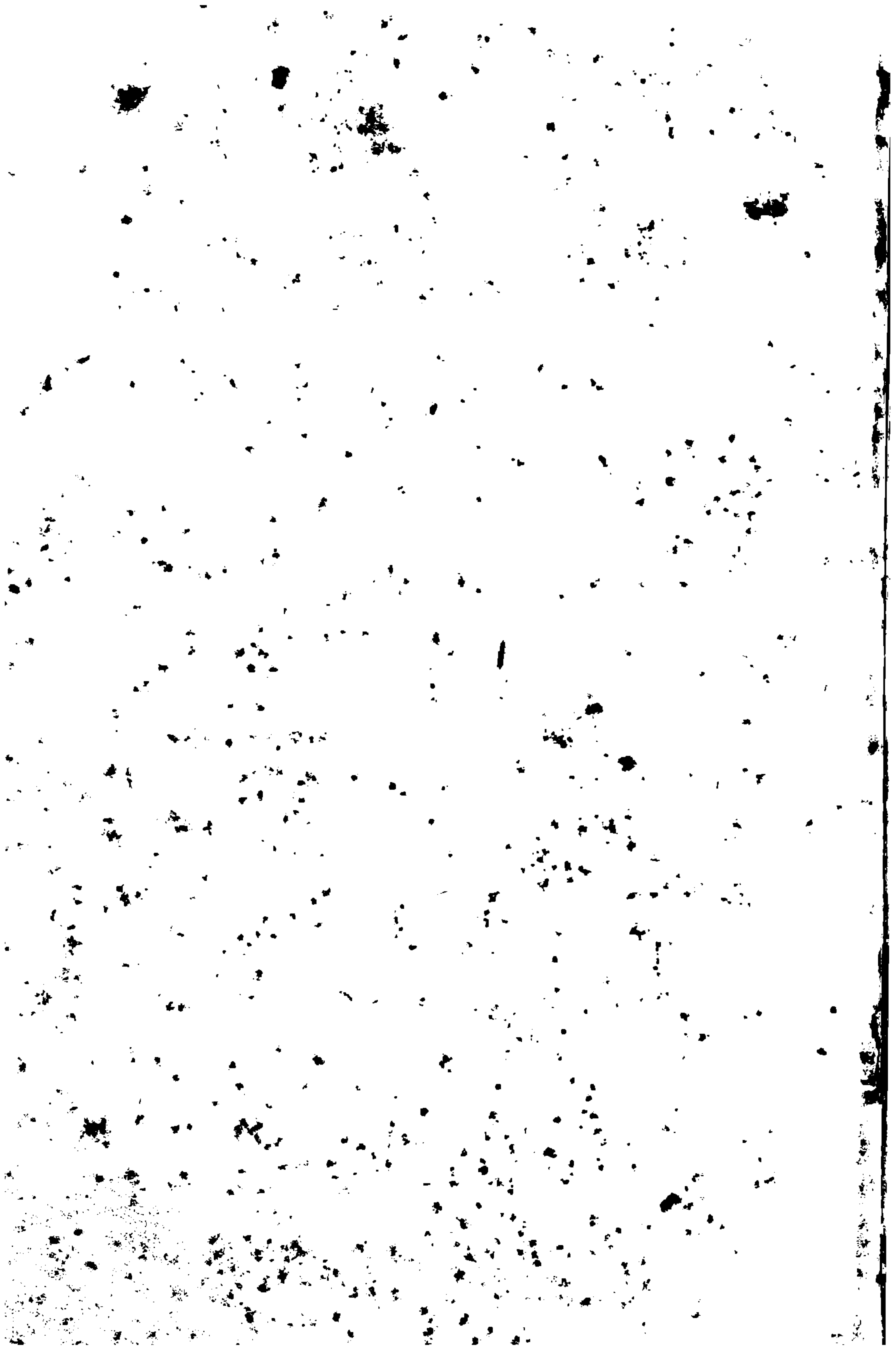
(jumble of words) of Marxist dogmatism. For the sake of the purity of his determinism, Prof. Dasgupta seems to fight shy of the idea of emergence, though he cannot do without it while describing the "Law of Dialectics".

The chapter on Dialectics is the Achilles Heel of the book. It is difficult to see how the otherwise useful (informative) outline of modern physical theories given in this chapter makes dialectics more understandable. Prof. Dasgupta himself seems to have had the same feeling. Therefore, his exposition of dialectics is mostly quotation from Marxist scriptures. At the conclusion of the chapter he writes: "A typical example of transformation is the change at the boiling or freezing point of water." If this example typifies dialectics, then, was it not superfluous to take the reader through the intricacies of modern physical theories?

Prof. Dasgupta boldly attacks conservatism; but he seems to be afraid of offending Marxist orthodoxy. He does not see that neither materialism nor determinism can be defended against the formidable attack of New Physics with rusty weapons from the armoury of Marx and Engels. The very concept of matter having undergone a revolutionary change, materialism may no longer be the appropriate name for scientific philosophy. Marxism, not regarded as the last word of wisdom said by a man once upon a time, may be the more suitable name. Therefore I suggested above that Prof. Das Gupta should have called his book simply "Marxism"; in that case, the logic of his own thought would have eliminated some of the minor shortcomings of a very useful book. As it is, he has given a very conventional exposition of Marxism. For instance, in one place he calls Marxism an empiricist philosophy; but in other places he quotes extensively from Lenin's book "Materialism and Empiriocriticism", which is a fierce attack on empiricism. Then again, he treats Marxism as an applied philosophy, rather as a school of ethics. "The main issue is that idealism

teaches abstract virtues and Marxism emphasises virtues attuned to society which alone can assure social progress." The function of philosophy is not to lay down codes of social behaviour. Prof. Das Gupta is very deprecating about "pure thought", which he equates with revelation or intuition. What then is mathematics and logic? And can there be a philosophy without logic? Without pure thought a materialist epistemology is not possible.

In a handbook, all these deeper problems, involved in the thought currents traced by Prof. Das Gupta, naturally, could not be posed and treated. He set to himself a limited task which he has accomplished very well. Deliberately or unconsciously ignoring the fallacies of orthodox Marxism, which would not change in course of time (Prof. Das Gupta lays great emphasis on the factor of change), and the extremely complicated problems about its future arising out of the experience of modern humanity, Prof. Das Gupta has maintained a stout optimism, which still visualises an automatic, "inevitable" (he does not use the word) march "from capitalist to socialist and from socialist to communist societies"! The world of experience, however, refuses to fit into this scheme, and is showing the tendency to run in tangents to all directions—even backwards. But blessed are the faithful.



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