

*Indian Philosophical Quarterly Vol. XVII, No. 1.*  
*January 1990*

## THE AVAILABILITY OF A MARXIAN CRITIQUE OF TECHNOLOGY

“Nothing so corrupted the German labour movement as the belief that it was swimming with the current, a current it located in the dynamic of technological development”.

— *Walter Benjamin*

The paper\* briefly looks into the prospects of a Marxian critique of Technology whose significance it seeks to locate in the context of the third world. In doing so it underscores Marx's idea of human nature and acknowledges the need for existentially grounding that idea in the colonial reality such that the Marxian critique of technology stands related to the colonial man's search for a counter-consciousness in his struggle against the cultural imperialism of the West.

Apart from this broad concern, the paper has an academic point to make in connection with the relation between philosophy of science and philosophy of technology. Our understanding of technology is always determined by our construal of scientific rationality for the simple reason that the content of technology is scientific rationality. Till recently the dominant view of scientific rationality has been positivistic. The construal of technology which may be called technicism looks upon technology as inherently progressive and precisely for that reason beyond all critique. The axiomatic status of our belief in the inherent progressiveness of technology and the dominance of

**Received : 25-4-89**

...3

positivistic construal of scientific rationality have nourished each other. It may be recalled that positivism in emerging as a conglomeration of the most influential answers to some time-honoured questions in philosophy of science re-shaped philosophy of science into a logical reconstruction of scientific knowledge. The process of retreat of positivism on the one hand and the metamorphosis of philosophy of science from logical reconstruction to existential deconstruction of scientific knowledge on the other, are two sides of the same coin. The development of a critique of technology and the development of an anti-positivistic construal of scientific rationality are continuous with one another. By implication if Marxism needs to develop an anti-positivist theory of science such an attempt must go hand-in-hand with an attempt to develop a critique of technology. Marxian philosophy of science will then acquire an identity and definiteness which it does not have to-day owing to its ambiguous position in a spectrum whose two ends are constituted by the Anglosaxon tradition that confines the task of philosophy of science to an explication of the aim and method of science and the continental tradition according to which philosophy of science must set for itself the grand task of a critique of science.

However, we can set the stage for the discussion of our central themes, viz., the prospects of a Marxian critique of technology by briefly responding to two basic questions :

- a) Why philosophy of Technology ? and
- b) Why Marxian philosophy of Technology ?

The relation of philosophy to technology can be traced to the very origins of philosophical thought. The pre-socratic philosophers aimed to reconstruct the world, at least partly, in the image of technological process involving combination,

separation, steering, production, transformation of the raw stuff into finished products as well as decomposition into original elements. In Plato the technological metaphor takes a fuller shape especially in *Timaeus* where he presents his cosmological theory on the basis of his theory of Forms. Out of matter, the formless receptacle, the world comes into being as a result of the realization of Forms – through the activity of demiourgos. As Wartafsky points out, “The demiourgos is plainly an engineer, and the world is an artifact created by this engineer by working up of raw material in accordance with mathematical ideas”.<sup>1</sup> Similarly, “Aristotle’s four elements, earth, water, air, fire clearly recognize the solid, liquid and gaseous states of matter and their changes by the intervention of energy. His elemental qualities had both origin and application in observation of properties of matter as they were exploited artisans”.<sup>2</sup> The influence of craftsmen over the metaphysical ideas is even more palpable in the case of the eastern thinkers. This is especially so in the case of the Chinese philosophers. To quote Cyril Stauley Smith, an eminent metallurgist who more than anyone else laboured to lay bare the philosophical and aesthetic dimensions of Metal technology, “Was not their fundamental yin-yang approach to difference and change a natural outgrowth of the inversions between model, mold and casting so beautifully exploited by the Chinese foundryman? Perhaps even his play with continuity and discontinuity in the arrays of relief and intaglio lines in the lei wen pattern, commonly used for space-filling on the surfaces of ceremonial bronzes, led to the invention of the hexagrams that form the potent permutations in the *Book of changes (I Ching)*”<sup>3</sup>

Until the rise of modern science and modern philosophy, the role of technology in philosophising confined itself to providing suggestive analogies in the form of teaching or learning aids.

With the mechanisation of the world-picture the role of technology underwent a radical transformation. The central technological entity, the machine, became constitutive of our construal of Natural World such that the world was cast in the image of machine, and like machine, it is taken to be constructed in mathematical terms which provide it a deductive structure and thus, like machine, it became 'reconstructible'. The role of machine-image was further extended to the realm of social relations which, because they were reduced by industrial civilization to the relations of abstract and quantitative exchange of commodities, were sought to be explained in mechanistic terms. The mechanistic image, then, enters as a further natural extension, the realm of the human individual. Two related processes that obtain at this stage are of special importance. With the coming of the computer for the first time in history man is being considered to be an extension of machine whereas till now machine was considered to be an extension of human ability. This is evident from the very idiom that is used in the description of 'the mental'. Secondly, and consequently, those processes that were identified till now with human choice are pushed into the domain of automatic control mechanism. The evolution of technology must be construed in terms of the changing roles of machine as suggestive analogy, cognitive archetype and surrogate for human choice. The last phase brings out in a particularly vivid manner the progressive appropriation of our cognition by machine. It is this phenomenon which has provided philosophy of technology an intellectual significance and urgency not possessed by any other philosophical sub-discipline.

Some brief remarks on the question 'why a Marxian philosophy of technology?' are in order. In its struggle against imperialism the third world confronts modern technology as the most powerful bulwark of imperialism both in terms of power

and exoticism. Here also, we find, as elsewhere, an attempt to develop a counter-consciousness in terms of an indigenous reflection over relevant technology. But such an indigenous reflection, by the very fact of its being 'reflection' can not be content with relativism. For reflection by its very logic involves global concepts. The search for indispensable global concepts compels the colonial man to look at the available global theories which are supposed to be the repositories of the required concepts. But he finds only Marxism to be promising since other global theories are most conspicuously eurocentric and manufactured for the sole purpose of justifying imperialism. If we don't grant this credit to Marxism we can not explain the appeal of Marxism felt by those who are fighting imperialism in political, economic and cultural domains. Since modern technology has been proved to be the most powerful means of subjugating the third world and since Marxism has at least the initial plausibility in providing the indispensable global dimension to the indigenous reflection that would lead to a liberating praxis, a Marxian philosophy of technology in the form of a critique of technology has a seminal significance for the third world.

But this hope is belied by the failure of the Marxist tradition in providing a critique of technology. Though the word 'technology' never fails to figure whenever Marxism is called upon to state its first principles, technology itself is never deemed to be an object of critique. Unlike religion, law, economics etc., technology is placed beyond the pale of critique. As Monika Reinfelder so aptly puts it, "just as political economy exhausted itself with the insight that the content of the value-form is labour, so Marxism exhausts itself with the view that the content of technology is 'scientific rationality'. Thus, one can say of Marxism's perspective on technology what Marx

said of political economy's perspective on value : namely, that "it has never once asked the question why this content has assumed that particular form". Thereby, the dominant Marxist understanding of technology remains at the level of immediate appearances, and the prospect of a critique is foreclosed".<sup>4</sup>

By foreclosing the possibility of a critique Marxism erects a theory of technology which, like its bourgeois counterpart, systematically hides the class character of technology. Though Marxism admits that the class societies develop the means of production for the narrow interest of the propertied class which lies in extracting maximum surplus labour from immediate produces, this interest is said to unwillingly promote the transcendental goal of the means of production., the technical mastery of Man over Nature. The social relations of productions, on this view, are attendant circumstance of the technological process which is the 'inner essence' of the historical development. The assumption of an independent 'telos' of technology pushes Marxists to embrace the shallow theory of use-and-abuse of technology whenever they confront the dehumanizing effects of technology.

The failure of Marxism to provide a critique of technology is, therefore, the immediate result of a teleological view of technology. Related to this is the positivistic construal of scientific rationality. The refusal of Marxism to raise the question, 'why has the content of technology, viz. scientific rationality, assumed that particular form?' can be explained by the fact that scientific rationality is construed in positivistic terms that do not allow such a question. For positivism, scientific rationality can be explicated (in terms of the canons put forth by it) but not explained since all explanation presupposes that rationality. Further, the repudiation of the very idea of human nature as an

irreducible ontological entity for the fear that such an idea renders Marxist theory metaphysical and therefore unscientific, further contributed to the failure in working out a critique of technology. A full blown theory of human nature could have provided, in terms of certain norms of appraisal, some safeguards against the dogmatic belief in the inherently progressive and unconditionally emancipatory character of technology. The revulsion of Marxists against such an allegedly metaphysical notion is not so much due to the anti-historical character of metaphysical thinking as it was due to its incompatibility with the positivist construal of rationality. Thus, the teleological view of technology, the positivist construal of scientific rationality and repudiation of the very idea of human nature reinforced each other in stalling a Marxian critique of technology. The tendency to take technology at its face value and browbeat any attempt at its critique has been so rampant in the Marxist tradition that those Marxists like Castoriadis who refuse to adopt an ambivalent position on technology are led to repudiate Marxist theory itself. According to them a revolutionary attack on capitalism, instead of taking over the existing technological ensemble, must attack that very ensemble along with its canons of scientific and technological rationality which enslaved even Marx.

But the method, content and the leit motif of Marx's own theoretical undertaking at once bring to surface the unwarrantedness of such a charge. The method he adopted in studying the structure and dynamics of capitalist society stands directly opposite to the canons of positivism. Apart from the ideas of critique and historical approach that stand at the heart of Marx's method and that can hardly find a place within the positivist framework, Marx's repudiation of the primacy of observation over theory, the central doctrine of positivism, puts

the nail on the lie. Marx writes in connection with his critique of political economy "Science, unlike other architects, builds not only castles in the air, but may construct separate habitable storeys of the building before laying the foundation stone".<sup>6</sup> Hence classical political economy is criticised not in terms of its failure to correspond to "objective" facts or in terms of its inconsistency with "empirically established" theories but by showing its limit through juxtaposing it with a new theory that establishes its own credibility by the very process of bringing to light the limits of the old theory and by a decision to legitimate certain questions that are not sanctioned by the old theory. Secondly, Marx's analysis of the relation of machinery to labour further lays bare his departure from the technicist orthodoxy. According to him, upon the formal subsumption of labour under capital effected by the social relations of capitalistic production, technology erects the real subsumption of labour under capital. The alienation of labour and its subservience to capital that remains incomplete at the manufacture phase of capitalism is rendered complete under large-scale industry "which makes science a potentiality for production which is distinct from labour and presses it into the service of capital",<sup>6</sup> "the dead labour that dominates and soaks up living labour power".<sup>7</sup> But Marx's most direct indictment against machine comes not in his recognition of the inversion of worker employing conditions of work into the conditions of work employing the worker – an inversion made technical and palpable by machinery, but in his earlier work – *Economic and Philosophical Manuscripts*, where a deeper inversion is recognised – the inversion of Man feeling human in animal activity and feeling animal in the peculiarly human activity of economic production. Such an indictment has at its core a conception of human nature that propels a description of technology as essentially dehu-



manizing, unless it is guided by our understanding of human needs and capabilities.

The thrust of the above discussion is to point to the existence of Marx's critique of technology, in however embryonic a form. A full fledged Marxian critique of technology, therefore, involves the development of these three dimensions, viz., his anti-positivistic methodological orientation, his indictment of technology as the instrument for subsuming living labour under dead labour and his conception of man. Of the three, the third must constitute the leit motif or nucleus for a Marxian critique of technology for the following reasons. The analysis of machine in its relation to labour and the consequent indictment is made by Marx within the specific framework of the capitalist mode of production. This specificity renders somewhat precarious any *general* critique of technology based on such an analysis. Hence, Marx's analysis of machine-labour relation cannot be the nucleus of a Marxian critique of technology. Equally, Marx's anti-positivistic methodological practice cannot play the role of the leit motif of a critique of technology. A theory of scientific rationality constructed on the basis of Marx's methodological practice must follow from a theory of being for the very requirement of its being anti-positivistic. It is to Heidegger's credit that he recognized that one of the fundamental assumptions of British empiricism (which it shared with neo-Kantianism) is that the problem of knowledge rather than the problem of being is the central problem of philosophy. Hence, the subsumption of the problem of being under the problem of knowledge must be set at naught if we want to develop an anti-positivist theory of rationality. So the answer to the question, "what is rationality"?, in the anti-positivist framework, presupposes the answer to the question "What is being?". If, as Heidegger thinks, "only in man can Being be domiciled", then the question "what

is the nature of human being?" is prior to the question concerning the possibility and nature of rationality. If the anti-positivistic theory of rationality locates rationality in the human being, it implies that ideally speaking all explanation must not only be didactic but also normative since in its framework progressiveness, objectivity and rationality make sense only within the context of human needs, and possibilities. If all explanations, ideally speaking, must be both didactic and normative, explanation in natural science, where normativity is at its minimal, must be treated as the limiting case of ideal explanation rather than as its paradigmatic case, as it is the case in the positivist framework.

The contention that Marx's idea of human nature is basic even for his idea of science can be more convincingly brought out in the following way. Marx's anti-positivist methodological injunction that Political Economy as science must penetrate the veil of appearance (form) and unearth the essence (content) was something more than a mere application of a metascientific principle perceived by him as best embodied in well-established sciences to the realm of the science of society. According to him, such an injunction inherently suits the object of Political Economy such that, as Norman Geras points out, "The relation between methodological injunction and object of study is no longer one of externality, as is the case with an abstract rule applicable to any content whatever. It is, rather, what may be termed, a *relation of adequacy* between object and method, the character of the latter being determined by the structure of the former".<sup>8</sup> The object of Political Economy exhibits an internal rupture between what is and how it is experienced. Marx's central notion of 'Fetishism of commodities' denotes the most basic fact of capitalism as a system of commodity production viz, in it the social relations appear to agents as relations bet-

ween commodities. It is this mystification of social relations as commodity relations that necessitates, according to Marx, a conscious application of his methodological injunction. The demystification does not lie in showing that such an appearance is an illusion. For it is not since human (social) relations in capitalism *in reality* have taken the form of relations between things. Rather, the demystification lies in laying bare the historical specificity of commodity fetishism. In doing this the demystificatory Political Economy counters the Bourgeois Political Economy that dehistoricizes value and surplus value, makes them products of nature and presents the objective forms of capitalist relations as the most natural state of affairs. It may be questioned how, given the centrality of the concept of historical specificity in the framework of Marx's ideas of aim and method of Political Economy, can one bring to bear his somewhat apparently essentialistic idea of human nature? If unanswered, this question leaves the rupture between the *Economic and Philosophical Manuscripts* and the *Capital* in tact. However, the concepts Marx uses to specify the essential features of capitalist society fulfil their cognitive function not by 'saving the phenomena' but by demystifying them. But, as Geras points out, "if, in order to do this, and in the process of doing this, they refer us to 'standards entirely foreign to commodity production', then they are at the same time critical concepts".<sup>9</sup> It is because of this criticality Marx's analysis contains "an accusation and an imperative". It is Marx's idea of essential human nature that provides the standards entirely foreign to commodity production. In short, Marx's critical method with its explicit methodological injunction to reach out for essences beyond appearances is parasitic upon his idea of human nature.

Coming to our present concern, it follows, therefore, that since a theory of rationality itself is dependent upon a theory of man, it is Marx's theory of man rather than his theory of

scientific method/rationality that should constitute the nucleus of a Marxian critique of technology.

But the dominant trend in the Marxist theory has been untiringly repudiating the very idea of human nature and denies that Marx ever entertained a theory of man. This trend is very old and its Althusserian version is perhaps the most recent and the most refined. Such a repudiation throws to winds not only the most pregnant insights of Marx into human nature at the early stage of his intellectual development but also his repeated invocation of the concept of human nature in his later (which is less philosophical and therefore more scientific !!)<sup>11</sup> period—be it in his negative remarks on Bentham or in his positive remarks about Ricardo and on many other occasions. However, the fact of repudiation at once explains the failure of the Marxist tradition in providing a fullblown critique of technology. Such a stance is traceable to the belief that any idea of human nature is metaphysical and hence unscientific. It is not difficult to see how much this belief is embedded in positivism. Apart from sharing the positivist denial of any metaphysical element in scientific theorising, it shares the positivist dogma that any general idea, because of its generality, has to be metaphysical i.e., that it is impossible to generate a non-metaphysical theory of man. It is here Heidegger has a lesson to teach by his philosophical practice of attempting to construct a theory of being which is non-metaphysical. The repudiation of the idea of human nature also explains the perpetuation of the myth of man-centred universe by Marxism, an indictment that Heidegger is so right in making. By repudiating the very idea of human nature, Marxists emptied that idea of all content. However, because it is left without content in the hands of Marxists, whenever it figured by itself or by proxy in Marxist theorising, that idea took the content in accordance with the dominant ideology

(termed 'Bourgeois' by Marxists) whose idea of man as fundamentally a consumer justifies and whitewashes most debasing fetishism of commodities characteristic of capitalist economy and culture.

So, an attempt to build a Marxian theory of Man should steer clear of the nominalist construal of Man that repudiates the very idea of an irreducible human nature and also the essentialist construal which under materialistic interpretation produces an understanding of man that is same as "the abstract materialism of Natural Science, a materialism that eludes history and its process".<sup>12</sup> Such a theory of man, among other things, is constituted by a theory of human needs, i.e., a theory of *puruṣārthas*. *A Marxian critique of technology, therefore, must specify the conditions under which technology seeks to satisfy an imaginary need in the real world, just as religion seeks to satisfy a real need (need to escape from estrangement) in an imaginary world.*

In spite of such a specific or specifiable orientation and task, the Marxist theory of Man might remain at the level of mere anthropological generalities. Hence the need for existentially grounding it in that reality which we mostly palpably experience. So far as at least the third world is concerned that reality is colonial reality. Hence the need for building a Marxian theory of colonial man. It may be noted that the colonial man is real entity. For his existence is axiomatic in understanding the socio-historical location of the third world. Yet, to the extent his characterization is made in terms of the fabricated theories that distort his history by inventing, among other things, the myth of precolonial barbarism, the colonial man is an unreal entity. He is both real and unreal like *Māyā*. Like *Māyā* the colonial reality is grounded in *Avidyā*—the false-consciousness accruing from the mis-identification of both coloniser and coloni-

zed. By existentially grounding its theory of man in the colonial man, Marxism becomes capable of identifying the specific modes in which technology produces and perpetuates a false-consciousness in the colonial world. It then learns to recognise, that the colonial man's struggle against technology is motivated by something more than 'nostalgic romanticism' and that the idea of *Swadesē* is a weapon against a false-consciousness that lies at the root of that strange tropical surrealism called the Third World

Department of Philosophy  
University of Hyderabad  
HYDERABAD - 500 134

S. G. KULKARNI

#### NOTES

Revised version of paper presented at the Seminar on 'Technology, Ecology and Heideggerian Ethos' organised by the Department of Philosophy, Goa University in December, 1988.

1. 'Philosophy of Technology' *Current Research in Philosophy of Science* Eds. P. D. Asquith and H. E. Kyburg, Philosophy of Science Association, Michigan, 1979, p. 172.
2. Smith, Cyril Stantey; 'On Material Structure and Human History' *Annual Review of Material Science*, Vol. 16, 1986, p. 6.
3. *Ibid.*
4. 'Introduction' in *Outlines of a Critique of Technology*, edited by Phil Slater, Ink Links Ltd., London, 1980, p. 11.
5. *A Contribution to the Critique of Political Economy*. Progress Publishers, Moscow, 1970, p. 57.
6. *Capital*, Vol. I, Harmondsworth, 1976, p. 482.
7. *Ibid.*, p. 548.

8. 'Marx and the Critique of Political Economy' *Ideology in Social Science* ed. Robin Blackburn, Fontana, 72, p. 286.
9. *Ibid*, p. 304.
10. Marcuse, Herbert ; *Negations*, Penguin, 1968, p. 86.
11. For a brilliant attack on such a view see, Norman Geras, *Marx and Human Nature : Refutation of a Legend*, New Left Books, London, 1983
12. Marx, Karl; *Capital* Vol. I, Progress Publishers, Moscow, p. 352.

## INDIAN PHILOSOPHICAL QUARTERLY PUBLICATIONS

- Daya Krishna and A. M. Ghose ( eds ) **Contemporary Philosophical Problems : Some Classical Indian Perspectives, Rs. 10/-**
- S. V. Bokil ( Tran ) **Elements of Metaphysics Within the Reach of Everyone, Rs. 25/-**
- A. P. Rao, **Three Lectures on John Rawls, Rs. 10/-**
- Ramchandra Gandhi (ed) **Language, Tradition and Modern Civilization, Rs. 50/-**
- S. S. Barlingay, **Beliefs, Reasons and Reflections, Rs. 70/-**
- Daya Krishna, A. M. Ghose and P. K. Srivastav (eds) **The Philosophy of Kalidas Bhattacharyya, Rs. 60/-**
- M. P. Marathe, Meena A. Kelkar and P. P. Gokhale (eds) **Studies in Jainism, Rs. 50/-**
- R. Sundara Rajan, **Innovative Competence and Social Change, Rs. 25/-**
- S. S. Barlingay ( ed ), **A Critical Survey of Completed Research Work in Philosophy in Indian Universities ( upto 1980 ), Part I, Rs. 50/-**
- R. K. Gupta, **Exercises in Conceptual Understanding, Rs. 25/-**
- Vidyut Aklujkar, **Primacy of Linguistic Units, Rs. 30/-**

**Contact :** The Editor,  
 Indian Philosophical Quarterly  
 Department of Philosophy  
 University of Poona,  
 Poona-411 007.