

**TECHNOLOGICAL THINKING IN EARLY
TWENTIETH CENTURY INDIA:
A STUDY OF SOME THINKERS**

*Dissertation submitted to the Jawaharlal Nehru University
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CERTIFICATE

This is to certify that the Dissertation entitled **“Technological Thinking in Early Twentieth Century India: A Study of Some Thinkers”** submitted by **Parvinder Singh**, in part-fulfilment of the requirements for the Degree of **Master of Philosophy** has not been previously submitted for any other degree of this or any other University. To the best of our knowledge this is an original work.

We recommend that this dissertation should be placed before the examiners for their consideration for the award of the above mentioned degree.

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*Dedicated to my
Father*

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To end, I am solely responsible for the errors and omissions committed in this work.

Parvinder Singh

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Preface

What follows in subsequent pages is broadly a study of ideas and concerns expressed by some prominent figures on the issue of technology with a special reference to India's problem as an underdeveloped economy. An attempt has been made to deal with their technological understanding not purely in the confines of technical or purely conceptual meaning but in terms of its broader implications on the socio-political system.

The Introduction explicates the manner in which the idea of technology has been problematised. Which is to serve as background to some major issues which these thinkers dealt with. The introduction, apart from stating the research problem, also throws up some of the important themes that will be picked up while discussing the individual understanding and views of these personalities. Subsequent chapters are divided under the four personalities chosen for research namely M.K.Gandhi, Jawaharlal Nehru, Sir M.Visvesvaraya, and Ram Manohar Lohia. These personalities have been chosen not only because of their contribution to the public life and the issues of concern in terms of ideas, but also because of their unique analysis of the problem of technology and the specific needs of India. The

Conclusion reflects upon the commonalties and references between their perception which emerge out of this discussion.

In terms of historiography it needs to be observed here that on the problem being dealt with very little research is available and in these pages we have used mainly the primary sources , i.e., primary writings by these personalities.

Introduction

The modern world has been shaped by its metaphysics, which has shaped its education, which in turn has brought forth its science and technology. So without going back to metaphysics and education, we can say that the modern world has been shaped by technology. It tumbles from crisis to crisis; on all sides there are prophecies of disaster and, indeed, visible signs of breakdown.¹

The research problem addressed in the following pages is as follows: In most simple terms this project deals with the study of idea and understanding of technology and its impact prevailing in the first half of twentieth century India. Focusing on four different political & public personalities of that era, namely Gandhi, Nehru, Visvesvaraya and Lohia.

¹ Schumacher E.F., Small is beautiful, (London: 1973), p.122.

In the introduction we shall see how the issue of technology and development, has been problematized in relevant recent studies. Why is there a need for such a study on technological thinking to be contextualized in modern India? The study should, tentatively leave us with an understanding on following aspects. How was technology established in its more extended meaning as an interactive and a dynamically consequential process? How was technology understood as a means of hegemony and of maintaining status quo (in its deterministic aspect)? Thus how was a new technological understanding was to be oriented towards breaking this hegemony? And, more specifically, What are the ideas put forward by the thinkers studied here on certain key issues, e.g. (i) the issue of Decentralization and self sufficiency (ii) the issue of employment (iii) the issue of prioritization of objective (iv) a scope of a radical intervention in seeking new techno-developmental systems.

It is startling, to observe that when efforts are made at identifying the modern civilization, or for that matter of the whole history of the past two hundred years, how much it gets reduced to a single idea. In fact all the experiences and efforts attained in this period converge towards the idea of development in association with the concepts of science and technology.

Right from its inception the scientific pursuit, a major part of its discoveries and inventions, made sense only after being combined into creating a specific technique of production. "Why the inventions of specific machines should suddenly come with the 1760's, this cannot be explained solely by impulses of imitation and improvement within the technological sphere: they were undoubtedly linked to the state of industry and economic resources from which the impetus need to come"². Technology created industrialization; the industry in turn defined technology and both together gave science its meaning and relevance. The fact is that any discussion on the dominant idea or system of the age has to merge with the idea of industrialization, which in turn has to merge with the idea of science/technology. In past few decades the veneration of science has reached to new proportions as it has increasingly got embedded to the reason of state. To the traditional reason of state (of national security) two new ones have been added, in form of the science and development.³ Significance of this development has been that today in the name of 'Science of development',⁴ state can demand 'enormous sacrifices and inflict immense sufferings on the ordinary citizen. These excesses in the name of a political agenda are being borne

² Dobbs Words quoted by Habib in 'Capitalism in History', Social Scientist, Vol.266-68, p.19.

³ Nandy A., Science Hegemony and Violence, (New Delhi: 1988), p.1.

⁴ Ibid., p.2.

quite willingly; a willingness which has traditionally been shown only towards the issue of national security.

Nandy's Contention is that the modern science has extended to the state power, the use of scientific knowledge outside the reach of the democratic process. Above all it has facilitated the growth of institutionalized violence in place of personalized face to face impassioned violence associated with traditional concepts of sacrifice and feuds⁵. It will suffice here to say that modern scientific research, almost upto 80%, is engaged in the developed of war Industry.⁶ The strongest nation today (i.e. US) produces and exports arms double the amount of that exported by the second one ion order.

Such studies clearly help us to understand the extent of bondage to which the idea of development and technology is being subjected. apart from establishing its association with power and control.

Another significant growth which has taken place with regards to the usage of science is that it has become coterminous to technology. Perhaps it always was almost coterminous. As Nandy indicates, the boundary between science and technology

⁵ Ibid., p.2.

⁶ Shiva, Vandana, Science Hegemony and Violence. (New Delhi: 1988), p.232.

has been softening for about two hundred years.⁷ Yet even today the argument separating pure science and technology is maintained. The reason behind this he argues is that by distinction between science and technology all social criticism of science can be continued to be deflected away from science towards technology. Vandana Shiva almost echoes this argument

The conventional model of science, technology and society locates source of violence in politics and ethics, that is, in the applications of science and technology not in scientific knowledge itself.⁸

But this wedding of science with technology and hence their mutual defining status of the two cannot be denied.

Development is an ideology. It is heir to an unbroken line of influential ideas, all of which seemed obvious.⁹

Let us observe on the above note the reasons behind this ardent commitment to the idea of development; or simply to the development of industry & the whole of its Western package.

⁷ Nandy, Science Hegemony and Violence. (New Delhi: 1988), p.2.

⁸ Shiva, Vandana., n.6, p.234.

⁹ Alvares, Claude, n.6, p.90.

One need not refer here in detail to the dialogue of power differential between the occident and the Orient. Yet it is important to indicate that for the colonized the discourse of depravation and backwardness prepared by the occident became the way to realize his place in the modern and industrial world. The agency of colonialism introduced them to their backwardness and its modernity and hence development of a particular kind. Nandy has referred to two distinct categories of colonization, to show its expansion and increasing complexity towards newer forms of subjection.

The first one was by a generation of bandit kings who conquered the colonies sought to be helpful. They were well meaning, hard working... and believed in science equality and progress. They faced ... and expected to face other civilization with their versions of middle kingdoms and barbarians.¹⁰

The second one was a colonialism, which colonized mind, and it made the colonized change their own priorities and realizes it in western terms. In the process, it helped generalize the concept of modern west from a geographical and temporal entity to physiological category."¹¹ Once the idea of development got

¹⁰ Nandy, *Intimate Enemy* (New Delhi: 1991) pp.X-XI.

¹¹ *Ibid.*; P.X-XI

epitomized in the industrial revolution, as the mirror image of the west it also gave the west its rightful place of a tutor.

A rather simplistic story of capitalism and industrialism was invented only jarred by gross omissions.¹² It is interesting to note also how the source and supply of capital has not been investigated thoroughly while studying the development capital and Industry. As Sweezy indicates 'Marx says very little about the actual methods by which there [external] accumulations found their way into industry.'¹³

The whole process quite deterministically denied any possibilities of plurality, especially in terms of technology as being different from anything but industrial technology. This whole process has been quite emphatically placed by Claude Alvares under the term *Tyrannization of historical possibilities*.¹⁴ Vandana Shiva has made similar and interesting observation about the reductionist nature of modern science. She writes.

In order to prove itself superior to alternative modes of knowledge and be the only legitimate mode of knowing, reductionist science resorts to suppression and falsifications

¹² For Example the role of internal and external use of force has been underplayed.

¹³ Sweezy, as quoted by Habib in *Social Scientists*, vol.267-68, p.19.

¹⁴ Alvares C., *Homo Faber*, (Delhi: 1979), Intro.

of facts and these commits violence against science itself, which ought to be a search for truth.¹⁵

There was an inevitable adherence to this hegemonic discourse of industry by the neo-colonial/post colonial and third world. After freedom this whole set went on to pursue the ever-illusory agenda of development which simply meant industrialization.

Consequently under-development was understood only as a lack of industry. But what had sustained there 'non-industrial' past i.e. the native systems and practices become obsolete.

Gunnar Myrdal¹⁶ sum up the major issues of technology in economic development. Schematically, they are as follows:

The problem involving modern technology is its requirement of large initial investments.

The Industrial technology being mainly a product of economies that have scarcity of labour and relative abundance of capital, it tends to be labour saving and capital intensive. The most pertinent question which is sought to be resolved by industrialization and modern industry is that of employment, it is

¹⁵ Shiva, Vandana., n.6, p.231.

¹⁶ Myrdal, Gunnar., Asian Drama, (London: 1968) Chapter 19;.

believed that industrialization would radiate a stimuli through out the economy and lift it out of stagnation. But as has been argued, in the developing economies the effect of industry is unlikely to show its effect for a substantial period of time.

Finally, before we move on to the specificities it is important to draw here, a distinction between the two trends, which inhabit this debate, on technology & its problems. The first one is what can be called a discussion on the 'uneconomy' of the present day of industrial technology. Under this one finds, in terms of broad principles following objections to the use of industrial technology.

Human nature revolts against inhuman technology, its organization and political patterns. The living environment, which supports life, aches and groans under and gives signs of partial breakdown. Inroads being made into the world's non-renewable resources, particularly those of fossil fuels etc.¹⁷

The discussion on technology with a primary to such concerns goes under the banner of "eco-economics" or "economics with a human face" and so on.

The second trend deals with the problem of development instead of problems from development i.e. it probes the idea of

¹⁷ Schumacher, Small is Beautiful, (London: 1973), p.97.

technology with specific reference to the third world, and its quest for development.

Our project is inclined more towards the latter. Though the question and answers in both the cases overlap.

Chapter 1

Gandhian Sarvodaya¹

Commenting on Smithian economics, Gandhi wrote:

Adam Smith, after laying down principles according to which economic phenomena are governed, went on to describe certain aspects which constitute the 'disturbing factor' and prevented economics from having a free play. Chief among these was the human element.²

Gandhi had a very clear perception of what his economic views were posed against. The disturbing human element in the Smithian paradigm was the very basis of Gandhian economics. While Smith's 'pure economic motive epitomized disinterested play of economic laws, Gandhi's pursuit was to establish

¹ Sarvodaya was the title of "Ruskins' Unto the Last, published in Indian Opinion.

² Harijan, 21-9-34, p.253.

supremacy of man over laws, and to place him at the centre of all economic objectives.

But how was he to arrive at this very simple yet fundamental distinction is significant. How did Gandhi in purely economic terms seek to bring in this change in the objective of economics? That too without effecting a fundamental change in the matter of ownership and control, which till date and traditionally has been seen as the most direct method of defiance and change in the economic system. As we shall see in course of our discussions in this chapter, he did this, or at least sought to, by changing the focus on to technology or technique of production and its impact on socio-political aspects.

There is available a whole corpus of writing on Gandhian economics in general, by both scholars and Gandhi himself in detail. But for our present purpose we shall focus only on his analysis of technology. We will also have to refer to numerous associated discussions. The concept of technology is being dealt here, as an interactive idea dynamic is practice, and influencing a whole set of relations not only in economic term but in socio-politico terms as well. We shall broadly deal in this chapter with Gandhian idea and understanding of technology at two levels.

Firstly we shall take an overview of the intellectual and historical background of Gandhi's break. Let us began first by

presenting a historical and intellectual background of 'Hind Swaraj' and thus the basic tenants of his economic philosophy. Of particular interest to us is the recent work by Anthony J. Parel titled 'Gandhi: Hind Swaraj and other Writing's'.³ With this publication Hind Swaraj has become a part of Cambridge Texts in Modern Politics. It is interesting to see it being appropriated by the very system of knowledge, which Gandhi sought to reject.

Parel through a tenacious effort has provided perhaps the most comprehensive study of the formative influences on Gandhi's work and his early ideas. From the Hind Swaraj⁴ we shall locate the 'modern and Westernized/industrialized' civilisation in Gandhi's approach to history. Secondly, we shall explore the question, what was the background to Gandhian approach and how that contributed to Gandhi's conceptual arsenal.

Integral to Gandhian analysis was his stunning and comprehensive critique of modern/western/industrial, civilization. Gandhi defined civilization as a mode of conduct, which pointed to man the path of his duty. To him the western civilization was the outcome of two processes "enlightenment and industrial revolution". As Gandhi associated western civilization

³ Anthony Parel; Hind Swaraj and Other Writing (Cambridge: 1997).

⁴ Ibid., Preface xxxii.

only to a specific chronological span. "Let it be remembered that western civilization is only a hundred years old, or to be more precise fifty."⁵

It is interesting to note that Gandhi related industrial revolution not only to a technological change in the mode of production but also saw an entire practice of life emerging out of it, 'embracing a peoples outlook on nature, religion, ethnic science, knowledge, politics etc. It must be pointed out here that it is this understanding of technology or industry in its totality, which helped Gandhi to treat it as germane and cardinal to the new civilization.

His criticism of industrial technology or the industrial society was from some important critique of industrialism being produced by contemporary thinkers and scholars. We shall refer here to two such works enlisted by Gandhi as references in Hind Swaraj.

Parel indicates that the seed of non-violence and a creative use of religion in its dissemination can be traced to "The Kingdom of God is within you".⁶ But the most interesting and controversial document by Tolstoy in this context was , "letter to

⁵ Hind Swaraj, (Ahmedabad: Navjivan: 1962), p.72.

⁶ Parel; p.xxxvi.

a Hindoo".⁷ It is from this, that Gandhi derived his unique understanding of the common enslavement of the colonial masters and their colonial subjects. Gandhi argued both have to be liberated from the monster machine and the civilization that it breeds.⁸

As Tolstoy wrote:

...it is not the English who have enslaved the Indians, but the Indians who have enslaved themselves.⁹

Now consider the following statement by Gandhi in an amazing accord with the one referred to above by Tolstoy.

The English have not taken India; we have given it to them. They are not in India because of their strength but because we keep them.

Consequently, on the question of how is India to be freed Gandhi argued that we need to free ourselves from materialistic greed acquire for their commodities and lust for their civilization.

⁷ Tolstoy, 1987,55.6.

⁸ See Louis Fischer, Gandhi and Stalin, (Delhi: 1947), p.7.

⁹ Ibid.

As he writes:

We brought the English and we keep them here. Why do you forget that our adoption of their civilization makes their presence in India at all possible? Your hatred against them ought to be transferred to their civilization.¹⁰

The other important thinker to have tremendous impact on Gandhi's economic philosophy was Ruskin. Parel thinks that it is from Ruskin that "Gandhi derives the basic principles of his economic philosophy".¹¹

Gandhi on several occasions wrote of the broad principles that he derived from Ruskin's 'Unto the Last'.

- i) That the good of the individual is contained in the good of all.
- ii) That a lawyer's work has the same value as the cobbler in as much as all have the right of earning their livelihood from their works.
- iii) That a life of labour i.e. the life of the tiller of the soil and the handicraft man, is the life worth living.

¹⁰ Hind Swaraj, (Ahmedabad: Navjivan, 1963), p.74.

¹¹ Parel, Hind Swaraj and Other Writings, (Delhi: 1997), Intro.,XXXIX.

Under the impact of this understanding Gandhi wrote, "I rose with the dawn, ready to reduce these principles into practice".

Ruskin argued that blankets must come before 'silk laces' and on this was based the idea of survived and serviceable leisure.

Parel further states that "There can be little doubt that Gandhi adopts Ruskins dictums to India is form of his doctrine of appropriate technology".¹² Now let us deal with Gandhi's specific idea on technology and industry, both of which for him went under the term machinery:

Gandhi's ideas on development and technology marked an epistemological break through. It looked at the question of India's so called under-development and poverty in a uniquely radical manner. It was quite different from the general ideas that the nationalist intelligentsia had and later the nationalist leadership continued to have on the issue. The latter failed to overcome the hegemonistic idea of development based on western experience to be followed, while Gandhi rejected that consistently throughout his life.

¹² Collected Works of Mahatma Gandhi, (New Delhi: Publication Division), vol.39, p. 239.

In Hind Swaraj Gandhi argued against the idea of large-scale establishment and its technology. The pursuit of large size and numbers only ended up dehumanizing the denizens of the system. Secondly, statistical figures might show in terms of size and numbers an incredible rise in economic prosperity yet in real terms the share of people in it gets less and less. Gandhi believed that an economy based on large scale industrial establishments and on massive machines did not do any good to the common man. Such a system owing to its size and complexities required a large amount of capital and control, this meant for the common man no control over his destiny.

To Gandhi the chaotic disruption and destruction, which the large-scale industrialization caused, was unacceptable. Hence he believed it to be much more pragmatic to strengthen and revive millions of villages, instead of trying to create an alien and new system in complete disregard to the existing systems of survival.

Gandhi was also aware of the ever-expanding circumference of exploitation, which was cardinal to industrialism and its technology, and hence the destruction that it caused. An interesting illustration of the above assertion can be found in the following statement by Gandhi. He writes: "God forbid that India should ever take to industrialism after the manner of the west. The economic imperialism of a single tiny

island kingdom (England) is today keeping the world in chains. If an entire nation of 300 millions took to similar economic exploitation it would strip the world bare like locusts."¹³

One of the most problems confronted by any modern day planning and adoption of the industrial system has been its inability to provide gainful employment to the masses. It is on this account that Gandhi provided some of his strongest criticism of the modern technology. He believed that an employment was not just a means of subsistence but also an engagement, which preserved the moral fabric of the society. The problem of unemployment in colonial India was greatly enhanced by the process of de-industrialization and destruction of traditional handicraft production. Further the agricultural sector, in its perpetual vulnerability to draught and famine and dependence on primitive/inefficient methods of production was the only source of employment and livelihood. Even this at best was merely a seasonal one.

Gandhi understood that the pursuit of industrial technology was a capital intensive one, which sought to constantly replace labour in various stages or aspects of production through increasing mechanisation. In other words, the mechanised factory system was essentially a labour saving

¹³ Harijan, 20-12-28, p.422.

and hence a labour displacing systems. But in terms of priority he declared: "We must utilize available human labour before we even entertain the idea of employing mechanical power".¹⁴

Gandhi attempted and managed to associate the idea of full employment to the philosophy of dignity of labour. He attempted to link to labour the idea of duty, honour and dignity to break the superiority, in terms of perception of machine production. He wrote:

The human body is meant solely for service and never for indulgence... God created man to work for his food and said that those who ate without work were thieves.¹⁵

It is in establishing a clear relationship between the nature of technology and its impact on the centralised or decentralised nature of polity, that Gandhi has shown the most holistic understanding of the technology. As he writes:

The whole gamut of man activities today constitute an indivisible whole. You cannot divide social, economic,

¹⁴ Harijan 25-8-46, p.281.

¹⁵ Young India 13-10-21, p.235.

political and purely religious.... in to water tight compartment.¹⁶

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It is not required here to deal at length to show that the modern industrial technology both in terms of its need of large capital and management required a strong central control whether by state or by individuals. Gandhi comprehended this aspect of industrial technology very clearly and from it emerged one of his genuine criticism of industrialism and formulation of an elaborate theory of Village Swaraj. In this system the village was to feature not only as an independent political unit but an independent unit economic self sufficiency was to be followed by maintaining and renewing the traditional practices. It would be a system which will be self sustaining in all aspects.

So Gandhi asserted;

In this structure, (village Swaraj) composed of innumerable villages; there will be an ever widening and never ascending circles. Life will not be a pyramid with the apex being sustained by the bottom.¹⁷



Gandhi also associated industrialism with the uneven regional balance in economic terms. While some areas develop

¹⁶ Harijan 24-12-39, p.293.

industrially others, though even in the same nation, suffer. He understood that the assembly line type of production required a large supply of raw materials and other factors of production. Consequently over the period are created certain centres of affluence and power. These selected centres exploit the vast countryside while the countryside becomes heavily dependent upon these centres. These centres owing to their economic control also start wielding political control. As he writes: "One centre of power now is New Delhi or, is Calcutta and Bombay in the big cities. I would have it distributed among seven hundred thousand villages of India".¹⁸

Gandhi argued that the domination and exploitation was not peculiar to the colonialism but to the industry itself. Thus while the colonial powers plundered their Asian and African colonies for sustaining its machines, the third world economies exploits their own hinterland, and practice a sort of internal colonialism.

He argued that this exploitative system should be replaced by a system, which would utilise the most abundant resource we have, in the form of manpower. "I heartily endorse the

¹⁷ Harijan 28/7/46, p.236.

¹⁸ Pyarelal, Mahatma Gandhi: The Last Phase, (Ahmedabad, Navjivan: 1956) vol.2, p.614.

propositions that any plan which exploited raw materials of a country and neglects the potentially more powerful man power is lopsided".¹⁹

Interestingly, Gandhi argued that not only the technique of production but also its scale, ownership or control and distribution should promote decentralization "When production and consumption both became localised, the temptation to speed up production indefinitely at any price disappears. All the endless difficulties and problems that our present day economic system presents, too, would then come to an end".²⁰

To put it simply the supplier or producer and buyers would interact, in a localized scenario; this would create a system sensitive to demand/need and supply. This would ensure the fulfilment of most basic of requirement, this again would only be possible through a decentralized and simple technology.

This would avoid the system of standardized mass production by large-scale industrial establishment. An aggressive marketing for creating need for conspicuous goods would not prevail. The buyer and producer would decide their own terms and conditions of exchange on the basis of necessity.

¹⁹ Selected Works of Mahatma Gandhi, (Ahmedabad, Navjivan: 1995), vol.6, p.236.

²⁰ Harijan, 1934.

In case of developing economies a great degree of centralized control of industrialism expressed itself in the planning by the state. Which in his understanding again meant dependence and loss of individuality, or simply that it went against the spirit of decentralization. Hence he suggested: "I must dissent from the view that the core of planning is centralization. Why should not decentralization land itself to planning as well centralization".

It is important to see what came out of this critique i.e. what were the specific ideas on technology, which Gandhi offered as an alternative to the 'satanic' industrialism. How did Gandhi intend to ensure fulfilment of the most basic needs, offer employment and control over their destiny to the masses and available capital also ensure investment of available capital without ardent internal or external cycle of exploitation, of man or nature.

The answer offered by Gandhi was simple: its body was Khadi and its soul was spinning. The themes of his alternative can be outlined by simply listing down the arguments he gave in favour of spinning.

1. It supplies the readiest occupation to those who have leisure and are in want of a few coppers.
2. It is known to thousands

3. It requires practically no outlay of capital
4. One wheel can be easily and cheaply made.
5. The people have no repugnance it.
6. It alone can stop the drain of wealth which goes outside India in the purchase of foreign cloth.
7. It automatically distributes the millions thus saved among the deserving poor.
8. Even the smallest success means immediate gain to the people.
9. It is the most potent instrument of sewing co-operation among the people.²¹

For Gandhi the superiority of Khadi spinning as a technological practice was clearly its simplicity, immediacy and feasibility. "The beginning of economic freedom and equality of all in the country and Khadi mentality meant decentralization of production and distribution of the necessaries of life".²²

Gandhi believed that revival of hand spinning and hand weaving will make the greatest contribution to economic and moral regeneration of India. The masses must have a simple

²¹ Young India, 21-8-24, p.277.

²² Constructive Programme, (Ahmedabad, Navjivan: 1961), pp.12-13.

industry to supplement agriculture. In this realization lay an acute and pragmatic economic logic. As he wrote: "If the reader would visualize the picture of the Indian skeleton, he must think of the eighty percent of the population which is working its own fields, and which has practically no occupations for at least four months in the year, and which therefore lives on the borderland of starvation".²³

Generation of substitute income in a predominately agrarian economy was possible only from allied economic/practices, which had simple technological requirement. It would be unlike an industrial factory nor dislocate manpower, instead it would avail them all necessities of hand manufacturing within their house.

Gandhian criticism of industrialism was also an account of the nature of civilization or life, which it fosters. He provides a detailed description of the de-humanization, which the material pursuit created, the in human living condition in the urban centres. The loss of soul ethnic and humanity turns the civilization into a kingdom of Satan etc. Some of characterisations made by Gandhi of attributes of modernity raise scepticism and unwarranted criticism.

²³ Young India, 3/11/21.

For example, One such idea is his criticism of doctors and modern medical science. Gandhi argued against it on two counts, firstly because the preliminary tests carried out on animals great pain and violence to them. Secondly, because it treated symptoms rather than treating the causes. To refer to his famous example in case of indigestion the pain was cured by doctors, instead of diet control. On the face of it this seems to be unacceptable as the modern medicine has put at the disposal of modern man an unprecedented ability to save life. But Gandhi had in mind medical facilities, which the poorest man had; he also had greater confidence in the traditional practices.

A similar example is that of his ideas on railways. As he writes:

The railways, too, have spread the bubonic plague. Without them, message could not move from place to place. They are the carriers of plague germs they accentuate the evil nature of man. Bad men fulfil their evil designs with greater rapidity. The holy places of India have become unholy.²⁴

²⁴ Hind Swaraj, (Ahmedabad, Navjivan: 1962) chapter on Railways.

But even in this instance while Gandhi talking about spread of evil talks also about how it has facilitated greater exploitation of India, in the same breath. An emphasis on form rather than idea would be a misreading.

Similarly, Gandhi's rejection of machinery has been criticised at levels, which completely misses the focus of his argument. Further he did over the years specify some exceptions which were ultimately necessary for society's need. He was "opposed to the craze of that people have for labour saving machinery, not to machines as such. Today labour is saved to such an extent that millions people become unemployed and ultimately many of them die from starvation".²⁵

It is useful to look at the Gandhian alternative in its spation-temporal context and not as infallible and ultimate. It is possible to assert here on the basis of our discussion that Gandhi evolved a radical and creative option which clearly reveals an innovative attempt to respond to the challenge of technology and to recover for the individual agency or subject status, i.e., control over his destiny. This was the main thrust of the Gandhian system, and instrumentalities (e.g. Khadi or indigenous medicine or diet control etc.) were no more than

²⁵ See the appendix A.

means agreeable to the spatio-temporal context in which these were devised and not essential, i.e., not an end in themselves.

Chapter 2

Jawaharlal Nehru

Nehru is more deeply influenced by the realistic and practical trend of the Indian mind than by its speculative, metaphysical trend. His heart is not free from a yearning after the realizations of the ultimate truth, but his mind, which rules over the heart, thinks that, for a long time to come, man will have to traverse the known world in light of exact Sciences before he comes to the stage when he can venture beyond into the realm of the unknown.¹

Limaye while emphasizing on the predominant pragmatism which marked Nehru's ideas and understanding also indicates in him despite the famous, scientific temperament, an acceptance of the unknown. This should not raise skepticism regarding the

¹ Limaya. Madhu, Mahatama Gandhi and Nehru, A Historical Partnership. (New Delhi: 1990), p.147.

objectivity, which permeated his analysis; it gives a glimpse of Nehru's famous vacillations. According to Mukherjee Nehru could throw up a general idea from time to time but he could not evolve and operate a strategy of social change.²

“Between the Conceptions and the creation
Between the emotions
And his response
Falls the Shadow”.³

The fact is that despite all responses of judgmental nature which mark such efforts at understanding Nehru he comes out as the embodiment of vitality and vigour which inspired the dream and pursuit of the promised land i.e. a developing India.

He was the person who in the most pronounced manner dealt with the problems and prospects of India, with a complete perspective involving a clear understanding of historical forces which were at work in India.

In this chapter we shall deal with Nehru's technological understanding, with regard to India's poverty and under-development, on following terms.

² Mukherjee, H., Gentle Colossus: A Study of Nehru, (Delhi: 1980), p.127.

³ Ibid.

Firstly, we shall observe the manner in which Nehru characterized the contemporary world; the problems of capitalism; and the undying veneration of industrialism. Secondly, we shall discuss his idea on machinery or industry with regards to concern of regional or local specificities, which India posed. In this we shall be deriving to a great extent from the famous debate between the mentor and disciple between Gandhi and Nehru. Finally we shall consider in a general manner various aspects which were influenced by technique and control i.e. planning; the nature of polity in its decentralized or centralized form, etc.

Nehru wrote in 1933 a series of articles titled 'whither India in newspapers to clear "minds of all, of all the tangled webs that may have grown these, to forget for the moment the immediate problems before... what exactly do we want? And why do we want it?"⁴

Through this article Nehru not only attempted to contextualize the debate on India's under-development not just in terms of National movement but significantly in terms of the global historical process at work. He criticised the nationalist leadership for an utter lack of a historical perspective. Deriving

⁴ Whither India, As an Appendix in Congress Centenary History, vol.II, 1985, p.642.

from this criticism Nehru raised some fundamental and yet vital questions.

He questions the Nationalists: "... whose freedom are we particularly striving for, for nationalism covers many sins and includes many a conflicting elements. There is feudal India of the princes, the India of Zamindars, or small Zamindars of the professional classes, of the agriculturist or industrialists, of the bankers, of the lower middle class, of the worker. There are interests of foreign capital and that of indigenous capital"⁵

What is significant here is the realization by Nehru of the myopic understanding of the clash of interests, which the Nationalists saw only between the national and imperial interests. As we shall see during the course of our discussion, Nehru looked beyond this myopia adopting a viewpoint. This stemmed from his political understanding of the nature of the class as group interests of the nation and the global trends economically manifesting itself through the two systems of capitalism and communism. . Nehru believed that the capitalism or capitalist system has through a revolution in Industry solved the problem of production. In other words the improvement in science and technology has created a massive mechanized production; Nehru is all praises for mass production and

⁵ Ibid.

standardization. But Nehru asserts what the capitalism has failed to do is to distribute, he argues capitalism is in a state of perpetual crisis as it has failed to devise a method of distribution devoid of exploitation. He held that there is no lack of resources in the world, no lack of foodstuff and other means of survival. "And yet the system breaks down and while millions starve and endure privation huge quantities of food stuff and other articles are destroyed".⁶

As far as the 'orthodox socialism' was concerned Nehru believed that there was not much hope from it. "The war has shown that an all powerful state is no longer of individual liberty" and an excessive bureaucratic function resulted in delayed growth.⁷ But despite this socialistic pattern had managed to great extent and had potential to further solve the problem of distributions, which capitalism had failed at. Socialism with its control would ensure, he believed, fulfilment of the needs of the masses and thus end deprivation and starvation. Thus he declared: "India will have to go that way if she seeks to end her poverty and inequality though she may evolve her own-methods and may adapt the ideal to the genius of her race".⁸

⁶ Ibid.

⁷ Jawaharlal Nehru Selected Works, vol.1, pp.143-144.

⁸ Quoted in Mukherjee's Gentle Colossus, (Delhi: 1986), p.128.

It is important to make two observations at this stage. On the basis of his criticism and understanding of the capitalist pattern it is clear that he credits it for creating industrial technology. Secondly socialistic pattern which India was to aspire towards was to have the same technique of production but only in terms of control and regulation it was to be different. Thus any adaptation was to keep in fact in essence at least the technology of mass production and heavy industrialization. But one needs a word of caution here. Nehru's ideas were in continuous flux hence over the years one finds in his understanding some significant changes, which we shall bear in mind.

Let us now turn to the famous Gandhi Nehru debate on various aspects of economic needs of India. The major issue of debate was the question of machinery and technology suitable for India. This debate is featured in the correspondence between them, which began in 1928 and is exceptional and rare in terms of the clarity and openness they reflect.⁹ Nehru argued with his mentor about the misjudgment he had made about the modern/western civilization and its achievements. As he writes: "You misjudge greatly I think the civilization of the West and attach too great an importance to its many failings. You have stated somewhere that India has nothing to learn from the west

⁹ As an appendix in Limaye's Historical Partnership, January 4th 1928 from Gandhi to Nehru. (See Appendix B)

and that she has reached to pinnacle of wisdom in the past. I entirely disagree with this viewpoint and I neither think that this so called Rama Raj was very good in the past, I don't want it back. I think the western or rather industrial civilization is bound to conquer India, may be with many changes and adaptations, but nonetheless in the main based on industrialism."¹⁰ He further argued that Gandhi had focussed on the defects of industrialism but paid no attention to its merits. Nehru also criticized Gandhi for not observing a conflict between capital and labour.

In 1945 Gandhi decided it was time to address the "sharp difference of opinion" which had arisen between the two.¹¹ Gandhi reiterated the continuing and persisting belief of his in the basic premises of Hind Swaraj. He declared "My experience has confirmed the truth of what I wrote in 1909". He reasserted his belief in simplicity, ideal nature of village life and non-violence. He also defended himself against the charge of being a man who lived in past, as he asserted "My ideal village still exists in my imagination".

In response to this particular letter Nehru writes back in October 9, 1945 making an important concession, though purely in the realm of argument, towards and centralized technology.

¹⁰ Ibid., January 11th 1928 from Nehru to Gandhi.

¹¹ Ibid., October 5, 1945 from Gandhi to Nehru.

Yet his skepticism expressed itself." "Personally I hope that heavy or light industry should all be decentralized as far as possible and this is feasible now because of the development of electric power. If two types of economy exist in the country either there should be conflict between the two or one will overwhelm the other".¹² Further on the issue of independence as expressed by Gandhi in terms of self-reliance chiefly in technological terms, to Nehru it was not possible unless he was technically advanced, thriving with industry. Finally on the question of abundance and survival he argued that "there is no question of palaces for millions of people. But there seems to be no reasons why millions should not have comfortable up-to-date home where they can lead a cultured existence."¹³

But for Nehru the problems of industrialism printed out by Gandhi, was something, which was born out of mismanagement and could be cured. The idea was not to discard the system itself but to cure it. As he writes: "How to get rid of this evil, and yet how to keep the good in the present as in the past is our problem. Obviously there is good too in the present"¹⁴ To Nehru planning was the means through which industrialism was to be ushered in and most importantly it was the means through which draw backs

¹² Ibid., October 9, 1945 from Nehru to Gandhi.

¹³ Ibid. (See Appendix B).

¹⁴ Ibid.

or evils of industrialism was to be managed along with resolving the problem of distribution. As he spoke at an address: "Planning in under-development economies it becomes essential so that the limited resources are used to the best advantage and that the strategic points of economy are controlled".¹⁵

On minimizing exploitation within a nation Nehru found planning imperative. He urged that planning was essentially a process whereby we stop those cumulative forces at work which make poor and start a new series of cumulative forces which enable the poor to get over the barrier of poverty.

As we had seen both for Gandhi and Lohia a true democratic practice was invariably linked to economic decentralization in its respects to the technique of production and its control. Planning sustained and was required to be sustaining centralization.

Nehru was aware of this criticism or concern as he spoke at an address, "There is a curious argument raised sometimes that planning involves inevitably a measure of regimentation and compulsion and is opposed to democracy, and that democracy and planning cannot therefore go together"¹⁶

¹⁵ Jawaharlal Nehru speeches, States role in Industrialization, (S.W.J.N.), vol.iv, p.133.

¹⁶ Ibid., Democracy and Planning, p.124.

But in Nehru's scheme of things any effort of massive industrialization and controlled distribution of its fruits depended on planning which meant centralized control. Nehru never actually went down to prepare an institutionalized defence mechanism against it.¹⁷

He makes some interesting observation about the hegemonic agenda of development and industry, and its pursuit by the state. He observes that the development of modern nations of the west took place at a time when democracy as we know it today did not exist. The pressures from people did not come to the Surface. When people are politically conscious they make demands. The common mass of humanity does not agree to bear the cost of progress at the cost of its starvation. He indicates "A very eminent observer said that if democracy as England has today had existed in England at the beginning of the nineteenth century, the growth of British industry would not have taken from place.."¹⁸

We have in Nehru's writings some scattered ideas specifically on technology and machinery or on the related aspects.

¹⁷ See Jawaharlal Nehru Speeches, Institutionalization at Grass Roots, (Delhi: 1989), p.91.

¹⁸ Jawaharlal Nehru speeches, Crossing the Barriers of Poverty, p.111

In an address Nehru observed some changes which had been coming in the attitude towards villages and its production systems. He observed: "He (Gandhi) laid stress on villages industries and curiously enough, even those who were critical of him, who were skeptical about village industries and development of village industries have began conceding to its importance".¹⁹

What Nehru was arguing that there was no conflict between the two. He maintained that India will not be able to maintain its "freedom and independence" as nation without big industries. At the same time he accepted the fact that there could not be large-scale employment in India, "for a considerable time without widespread growth of village industries".²⁰ At another occasion he ardently insisted "I am all for the latest techniques; let there be no mistake about it" but interestingly he also argued that it should be applicable to conditions of India.

But at the same time he clarified, "For me, that is a bullock cart variety of economic talk which has no relation with the present..."²¹

To sum it up, in Nehru's historical vision industrialism was a stage in the advancement towards progress of mankind. He

¹⁹ Jawaharlal Nehru speeches, Place of the Big Machine, vol.III, p.24.

²⁰ See M.J. Akbar, Khadi and Socialism, (Delhi: 1988), p.465.

²¹ J.N. selected speeches, Bullock Cart, Motor Lorry, Jet Plane, p.59.

questioned his mentor Gandhi on the wisdom of rejecting all of western technology and industrialism, a reference to Hindi Swaraj (1989). His idea regarding correction of the distributive injustice of capitalism and regarding socialistic planning involved a degree of centralization of control. He did not accept the argument that such control involved infringement of democracy necessarily. He derived the growth of village industries but, at the same time, also asserted the need for big industry to preserve India's autonomy. Thus there were attempts in Nehru's thinking (if there is any trend in the midst of the flux one notices over the years) to reconcile high technology, industrialism, and centralization with their opposites. It was a heroic attempt to reconcile what many other posited as irreconcilable. Unlike many other thinkers, however, Nehru's thoughts concretely influenced policy-making from the fifties. However, that is beyond the purview of the survey. It suffices to note that his ideas were put to the test in the field of concrete policymaking, a test which many other thinkers escaped.

Chapter 3

Sir M. Visvesvaraya

Visvesvaraya presented in his approach towards India's undevelopment the most apolitical and objective pursuit of industrialism. Apolitical as it was in complete disregard towards the polity as an important determinant. Objective because all his characterizations emanated and ended only at one agenda, that of industrialisation. He was an engineer by training and an economist by concern, thus his ideas present an interesting blend of technical precision and in terms of details an elaborate exercise. All of this makes him an interesting and unique study. What makes him significant in the debate on technology and its impact, with reference to India's undevelopment and poverty? It is how he intended to come to terms with the problem of capital,

its control; issue of employment, self-sufficiency and finally the issue of prioritization.

In the course of this chapter we shall attempt a discussion on the following aspects of Visvesvaraya's understanding.

1. Technical and managerial aspects of industrialization
2. Employment through precedence of industry over agriculture.
3. Planning and the organizations of finance and investment.
4. Decentralized Provincial level organization of economic activities.

Quite obviously all this shall be discussed in the light of the ideas, which form the basic theme of his technological understanding.

Let us begin with the following characterization of the contemporary world by Visvesvaraya. He writes, "We are living in a rapidly changing world there have been greater and more rapid changes within the past 40 years than were witnessed in the previous 300 years. This is due to many remarkable scientific discoveries and mechanical inventions to which new era has given birth".¹

In comparison India presented a pathetic contrast to the modern, scientific and industrial world. The writing on the wall was quite clear and explicit: if India were to ever improve and move out of this poverty and deprecating it was to be only by the pursuit of the same attributes. So he came out with a monograph entitled "Planned Economy for India" in 1935, which in a book form provided in greatest detail a plan for India's path to industrialism.

It will not be out of place to refer to his own idea on what he wished to attain through this work; he writes, "To suggest the creation of opportunities and a course of action calculated to

¹ Visvesvaraya. M., Planned Economy for India, (Bangalore: 1937), p.3.

strengthen the Indian in business sphere that he may within the shortest possible period become man for man as capable a citizen as strong a national and as abroad minded in international as his compeer in America, Europe and Japan..”²

So to Visvesvaraya India’s problem was essentially to industrialize on the line of America, Europe and Japan. And the requirement as a plan to make that possible in India. Visvesvaraya carried out extensive tour of the First World to understand how the industries were being developed and the chief agendas of planning which were being evolved. It is significant here to indicate what were the major lines on which, Visvesvaraya believed the industrialism in the first world were being organized. He stated them to be primarily under following five heads:

- i) Mechanization and mass production.
- ii) Trust combines and mergers
- iii) Rationalization
- iv) Marketing organizations
- v) Labour Unions and combination.³

² Ibid., P.VI, preface.

³ Ibid., p.67.

Visvesvaraya argued that the agriculture from primordial times has wrongly been the most important sector of the economy. As a matter of fact 70% of the population of the country depended on it. He asserted that it was this dependence which has been the cause of continuing poverty. He argued that increase in the number of people employed in agriculture leads to a lowering of the general level of income and the average income of the population showed a general decline. Visvesvaraya's pointed out that in the case of industrialized nations, the trend was the opposite. As he writes: All progressive countries in the modern world are moving towards industrialization. In India on the other hand tendency has long been in the opposite directions. According to the census of 1891, the population dependent on agriculture was 59.8%, It rose to 71.3% in 1931.

Then what were his recommendations for Indian agriculture and employment problem in general. It can be surmised easily from the superlative appreciation he had for the methods on which agriculture was organized in America. For instance consider the following: "The production of large

quantities of crops is rendered possible by use of machinery worked by motive power. In America machinery to plough and reap is expensively used, the motive power being chiefly gasoline which is also produced cheap in that country... the principal machines in use are the tractors harvester, thresher and combines".⁴ Thus for him it was desirable to heavily mechanize agriculture. As it would reduce the dependence on labour and increase productivity.

It was Visvervaraya's belief that even a small increase in the number employed in industries is of much more value to a nation than a large increase in the less profitable occupation of agriculture.

Visvesvavaya makes no extensive comment on the unemployment, which will be caused due to mechanization. He probably believed that if the process was managed properly the pit falls could be avoided.

⁴ Ibid., p.135.

But the crux for him was that : "No country which aspires to be reasonable self supporting can do without agriculture. At the same time no nation in modern times has grown rich through agriculture alone.

Now let us turn to Visvesvaraya's ideas on planning and capital requirement needed for the suggested industrialization. He writes,

"Industrialism thrives under the Government" Visvesvaraya staunchly emphasized on industrial growth as the primary focus of planning. He supports his argument with reference to the Western Industrial nations. In the absence of any self-propelled economic impetus (as in Western Europe & USA) the plan of industrialization depended completely on state control and planning.

It is interesting to note that the only account on which one finds Visvesvaraya persistently and ardently critical of the British rule is due to its reluctance to initiate a planned effort at industrialization. Thus the greatest benefit according to him of

having a national government as opposed to a Dependency rule would be in terms of its efforts of planning and controlling industrialization.⁵

As we have seen in our analysis of other personalities over the period of earlier discussion both Gandhi and Lohia understood the constraints of capital availability in India and the loss of independence that it fosters. But for Visvesvaraya it was a different matter all together. Visvesvaraya has through meticulous calculations demonstrated possibilities of financing an industrial revolution but again this depends fundamentally on foreign borrowings, which in his plan is essentially to be obtained from Britain.

Visvesvaraya came out with a pamphlet titled "Nations Building" in 1937". In this he attempted to come to terms with the question of agency and decentralization.

It is significant for our discussion here to understand his ideas on provincial level decentralization. This went for him

⁵ Ibid., p.37.

under the establishment of real self-government in villages and "Introduction of District Development Schemes". Visvesvaraya argued that sometimes heavy industries are required as key industries, which supply tools and raw materials for cottage industries. The development of heavy and cottage industries must go on hand in hand if the country was to prosper economically and be self-sufficient. He gives instances of advanced countries of Japan in particular. So he argued for an integrated approach. As he asserts small-scale industries for rural areas came next in importance to big industry as a means of increasing income.⁶

He argued that some industries needed to be promoted for the purpose of sustenance and extra income, along with agriculture, which would be like production of clothing, manufacturing of metal utensils furniture etc. Thus the bulk of the increase is occupation and should come from cottage and small scale industries, particularly those intended to supply goods

⁶ Visvesvaraya. M., Nation Building, (Bangalore: 1945), p.20.

for which there is a demand within district itself.⁷ Eventually as a result of district plan, he believes, under the five years plan every third or fourth house in the village should have a small workshop.

It is interesting to observe that though Visvesvaraya ardently argues for socialized production and centralizing control, he also provides arguments for real self-government in villages. But just like the state government, the purpose of self-government in village was also to be for attaining economic gains, so that the people of the village be encouraged to increase production.

The significance of M. Visvesvaraya's contribution to be discourse of technology and development in the first half of the 20th century may be summed up as follows: Unlike Gandhi, Nehru and Lohia, he was a trained engineer and technologist who brought to bear on the problem technical knowledge. His familiarity with the advanced countries techno-managerial system also gave him an advantage over the others. His focus on

⁷ Ibid., p.34.

industrialization as the agenda for the nation was qualified by (a) encouragement of small-scale rural industries, (b) planning at the governmental level, and (c) de-centralization of planning and programme execution to district and village level. While in understanding the political and social problems associated with his programme he showed a naiveté, it was an anticipation of the approach and mind-set that characterized techno-managerial experts in post-1947 period.

Chapter 4

Ram Manohar Lohia

Ram Manohar Lohia conceived the idea of a new civilization. Due to the boldness, ingenuity and sheer expanse of his ideas he still remains beyond an easy comprehension of most. He remains beyond the established outlook on development, a vexing presence. For those who seek a new path he is a source of new ideas.

Lohia questioned many of the promises, plans, and practices of the post-independence regime. Though sweeping in scope, his criticisms had some unity of purpose and desire. He was propelled by a keen concern to end poverty and inequality of every nature, societal, national, global etc.

He has left a vast amount of writings on numerous subjects marked by political and intellectual sensitivity. Yet we do not have many organized writings in form of books. They are all available in fragments:

Truth is known from an aspect or an angle. That is not to say that truth is partial. In fact partial truth is strictly speaking an error of expression... all truth is discovered from the aspect or the angle which the seeker or the known adapts. Errors may lie in not taking up the angle properly...¹

Insistence on fragments and conceptual truth by Lohia is of significance for our present inquiry. Especially in terms of its fall out on Lohia's treatment of economic systems and its technique of production, which has a bearing on the understanding of the term technology in its contextual and dynamically interactive sense.

In the course of this chapter we shall deal with the specificities of Lohia's ideas on technology and the context in which these ideas were conceived in course of his critique of

¹ Lohia R.M., Marx Gandhi and Socialism (Hyderabad: 1963), p.1.

capitalism and communalism. We shall also observe how he identified in these systems the practice of the ideological domination and hegemonization by the means of restricted and reductionist understanding of technology.

Finally we shall see how from this critique he derived an endeavor to subvert, or in the least deny status quo by means of a new understanding.

Let us begin with Lohia observations on the 'movement of history' i.e. how has it transformed from one era to another era, or from one phase to the another. This discussion is available in his essay "The Wheel of History".

Lohia after pondering upon the answers provided by the Marxist and Hegelians, has shown discontent on a specific account. Though these theories claim to have the last answer on the subject, he argues, yet they do not explain a fundamental question of rise and decline he further asserts that if there is no answer to this question then any discussion on the "law of history" is futile, as 'talking about the causes is quite different from talking about symptoms and signs. Lohia, perhaps in this question was seeking the reasons of how a civilization which in

past has seen glorious days had collapsed into decadence, and how will, rise again. Lohia did not accept the theories, which sought the movement of human history as a sure and steady one only in one direction. He argued that this idea of a belief in a movement towards a golden age was product of the confidence, which the west derived from the industrial revolution. This confidence for Lohia was integral to the very process of technological enhancement, which marks the industrial growth, and simultaneous improvement in the standard of living. This idea of continuous progress and movement towards an ultimate golden age was required to justify exploitation and brutalities.

Lohia in this whole discussion has attempted to award a transience to history by emphasizing that it was a consistent spell of decline and ascendance of human groups. He argued that the dominant industrial societies of the West were heading for a decline, and there will be resurgence of countries of the coloured world. The decline would be of the system and not merely of the social groups. As he argued the industrial/western civilization had lost the strength to spread itself to the entire human society. Perhaps it never had any scope of universalizing.

Lohia struck at the center of the debate on economic systems and the significance of technology in it by discussing its role in preserving a status quo.

This is evident from this extract from Lohia:

All doctrines emanating in the last three centuries of Europe's domination's have done so. Of capitalism or liberalism no proof is necessary, for their career is tied up with the oppression and exploitation of Asia and other coloured lands. All doctrines of it appears have their being within a certain framework of power. They are unable to burst this frame work not unless they are born outside it.²

Two interesting emphasis in the above passage need to be noted firstly the Euro-centrism of all doctrines and secondly the call for "bursting" the framework and faith in the potential of an idea "born outside" outside the framework. We shall observe the first assertion by taking up Lohias analysis of Marxist paradigm and its real problem with regards to technology.

² Ibid., p.viii.

Lohia argues that the essential core of Marxist doctrine is the analysis of capitalism and its system. He has made some specific objection in this analysis, such as the doctrine of surplus value, class struggle and ultimately that of revolution. His first basic criticism is that the Marxist doctrine has analyzed and understood the capitalism as a west European entity only. In other words it has understood the phenomena or process in a certain purely and disassociation to the non-European historical influences or relations of parasitic nature which were essential to its survival.

Capitalism indeed rose in the West Europe, grew in West Europe and attained its maturity there, but while it grew it exploited vast amount of territories. It depended on plunder of raw materials, and at the same time money transferred it is this, which sustained capitalism. Consequently Lohia argued that the capitalist development should be understood in its totality. As one needs to see it not just as an internal circle represented by the West European circle; but as an external circle incorporating rest of the world. The internal circle drew its dynamics from the outer one.

It will not be far fetched here to comment that Lohia in this analysis of capitalism not only warns of its inevitable requirement of satellite territories but also how exclusive it was. Thus did not offer a path of liberation for the coloured world.

He has also subjected the class analysis of Marx to scrutiny in light of post war developments. Marx argued that the class struggle would assume critical proportions in the advanced stages of capitalist. Hence the heavily burdened and exploited proletariat in the highly advanced economies of capitalism and this would usher in a communist or socialist revolution. Lohia asserted that though this both the processes is taking place but not in the same economies. As while the socialization of labour has taken place in advanced countries of capitalism but the predicted pauperization has occurred only among the retarded countries of Asia and Africa. Thus while the working class in UK Germany, US and countries in the stage of advanced capital and Industry were conveniently flourishing while the third world suffered.

It is this that caused Lohia's disappointment towards the potential of Marxist theory as a liberating force for the third

world. To him it simply said that while the chains belonged to the 'coloured' and retarded world yet the hope for a new civilization belonged to the 'first world'.

To Lohia erecting the 'great masters' of capitalist world with the possibility of being four runners of new civilizations was merely a fulfillment of the dominant status which each and every ideology has attempted.

Lohia's concern was to find a way out of this tyrannization for all of the coloured people, from the global subjugation. As he passionately asserted:

Now should it not be shown that with the pauperization of the mass of the people in colonies and erstwhile colonies, a revolution is likely to occur in these areas and the whole edifice crumbles.³

Lohia argued that communist state, derived more in terms of its economic structure from the system which it, is supposed to have born against. In terms of technique of production or the western machinery was inherited in toto from the capitalist system.

³ Wheel of History, (Allahabad: 1990), p.12.

After having treated the analysis of the capitalist system and the Marxist paradigm by Lohia let us now examine his ideas on Gandhian economic philosophy. As we shall observe not only did Lohia make the most interesting critical appraisal of Gandhi's ideas but also derived from him, in the most creative names, some basic tenants of his own ideas on technological system.

Lohia argued that Gandhian ideas showed tremendous internal contradictions; but only when look at without their context and reference.

To quote Lohia:

From his [Gandhi] belief that caste systems a part of religion, he went on to say that it was a Sin. From his belief that his sum total of the British empire tended to act for good, he went on to say that it was satanic, and from underlying belief in the sanctity of private property, he went on to demand its confiscation without compensation and termination of land ownership.⁴

⁴ Marx, Gandhi and Socialism, (Hyderabad: 1963) in Anecdote to Mahatama.

Lohia emphasized that one needs to examine Gandhi's specific statements in order to be able to apply them in "entirely" in their essence, to situations of 'an allied characters' which may arise in future, and to discover, if its at all possible 'the community of his thought and action'.

Lohia has made an interesting classification or distinction of dual nature in Gandhism in present, which has been expressing ideological and political usage.

The first order in which Gandhian has been expressing itself is what he calls 'the governmental and monastic one'. Now this variant of Gandhism Lohia asserts confines Gandhian ideas within most conservative and sterile usage.

As he writes:

Governmental Gandhism does nothing except to chase the pale shadow of limited public sector planning. Both live a merry, content, smug life, not devoid of luxury of a hierarchic kind.⁵

⁵ Ibid., p.xii.

The second order in which Gandhism has been expressing itself is what he calls, 'the oppositions and revolutionary one'. Now it is in this usage that Gandhi becomes most vibrant with a potential of ushering in the most basic yet fundamental change. Here these ideas cannot be disguised behind over simplifications restricting him to statues and idols.

Lohia made a significant distinction within the gamut of Gandhian ideas in terms of its 'ephemeral' and 'enduring' elements. This distinction in 'ephemeral' and 'enduring' elements becomes for Lohia an important method of deciding on derivation to be made from the whole corpus of Gandhian thought.

We shall have a much clearer conception of this understanding of Gandhian ideas by Lohia when we arrive at the specific discussion on machine and technology. However it will suffice to assert that Lohia pleaded for a more positive integration of Gandhian principles, but not by essentializing or damping completely the possibilities available today. As he argued if an economic thinking could involve, which did not 'deny the positive technology' of the present age but added to it

'Gandhiji's amendment' through not the 'concrete imagery' Gandhism might become 'relevant also as government'.

Lohia has argued this point by dealing with the doctrine of simplicity, or simple living, given by Gandhi, as an example. He writes:

Simplicity of living and its economy in Gandhian doctrine have not appealed to the mass of the world not even to any substantial numbers. To retarded peoples, it is a mockery and to the advanced, it is a joke.⁶

Through this Lohia has attempted to impress that on account of possibilities opened by modern technology a decent standard of living for all men should be a necessary goal of policy.

But this understanding is at the cost of complete denial of Gandhi's concern behind the idea of simple living, yet not by treating their concern as unflappable, i.e. not to be tampered with the considerations of time and context.

Instead Lohia argued for deciding where to draw the line on decent living, and secondly to decide as what constituted

⁶ Ibid., p.xiv.

luxury both occasional and permanent. He talks is great deal about the severe proportion to which the western pursuit of luxury and comfort has reached. Yet the refuges to draw from it a philosophy of complete abstention for people of third world whom any way are living in starvation and scarcity.

The world is becoming the play stage of moister-machines, after the bigger the better. How far is this apparent refutation of the small unit machine, it's on during denial?⁷

Lohia expressed this skepticism last in his 'em, he confessed that the development in modern science and technology in period following had 'a little shaken up the belief in small unit machine. But for him the specific and general reasons have endured the time.

Lohia argues that the very idea of small unit machine arose out of the specificity of the Indian 'situation' and in fact specificity of, what he called, the coloured and retarded people. What were or is the specificity, which call for small unit machine technology for India.

⁷ Ibid., p.xx.

First relation between the manpower and investment which existed in the third world.

Countries of the 'retarded' world being heavily populated had large stock of manpower, while there existed a scarcity of capital or investment consequently. Due to both the "considerations i.e. abundance of manpower and scarcity of investment a mode of machine was required which would be born out of 'such saving as were possible'. Further one need to engage the huge labour power. The second specificity, which provided for Lohia argument in favour of small machine technology, was the 'unmanageability' of the 'monster machine'.

To a man of a society devoid of educational facilities monster machine was incomprehensible, consequently instead of manipulation of such a technique or system of production he ends up being manipulated.

The effect of such a technology he writes is that,

The incomprehensible machine becomes also the unmanageable and therefore violates the idea of governmentally the people.⁸

⁸ Ibid.

In constraint, the small unit machine is by definition mere comprehensible and manageable. As we had seen while discussing Gandhi such a co-relation between technology and its plausible control by people is integral to any sincere efforts towards achieving some amount of control by the people, i.e. decentralization of power (politically or otherwise).

Lohia also argued against the industrial technology due to its palpable connection with the War of Waste. As he terms its "uneconomic of its destruction as well as its preparation".

In contrast the small machine is much more economical, efficiency for the type of technological systems seems to be 'in contestable and guaranteed, when another systems are based in theme fundamental terms upon plunder.

Further just like Gandhi, he believed that centralized and industrial technology creates a cultural monotone. But unlike Gandhi Lohia is not very decisive about it.

To state briefly to Lohia technology meant not a simplistic but a complex practice not just of know-how but of entire set of relations not just economic but social and political as well. To him technology was to be denied by the limitations as well as

priorities of subjective situations. Which in case of India was a lack of capital but abundance of manpower; need of a comprehensible system or technique of production by a highly uneducated populace; and finally to ensure through this comprehensibility of bare basic freedom and decentralization.

But as we had seen that in previous sections to Lohia all previous system and the technology were an important weapon for the west to maintain subjugation and domination of the third world.

Finally, we shall observe briefly the observation of Lohia made towards suggesting a new system. Which should be more on the terms of needs of the coloured or retarded world.

Lohia called this suggest system socialism, which he also termed as 'third system' the 'one in the making. To him the two available systems of capitalism and communism were fully elaborate systems their achievements he argues, had become meaning less for the majority. Most importantly these systems were no longer alive and open.

One of the most significant aspects of the proposed system was to be the incorporation of the idea of immediacy. For which much was to be ascertained from Gandhi.

As he writes have tried to think of Gandhi, he has come to me in the shape of an image; a series of step mounting upwards, all set in specific direction. But the top of it newer completely formed, and ever continuity to go up, a man who goes along cautions but firm steps and leads with him millions of his idea of; one step is for me'.

He moves on to emphasize that this socialist ideology would have to consider immediacy with regard to economic as well as political needs. Not necessarily in terms of the spinning wheel or those of the village republic. But perhaps in those of the small-unit tool and also those of autonomy village government. Thus he imparted new substance and meaning to socialist thinking.

Rammanohar Lohia's contribution to the socialist movement has been described but by Madhu Limaye. He writes.

He (Lohia) was the first socialist thinker in India who refused to have his mental horizons limited or dominated by the ideas drawn from the west or the Soviet Union.⁹

He took into account the special conditions prevailing in the two thirds of the retarded regions of the world and especially India and sought to work out his ideas in consonance with these conditions. Although profoundly influenced by Gandhi ideals he was no slavish follower of Mahatma Gandhi.

He was a great votary of the principle of decentralization in all its aspects but he was sensible enough to say that the solution of India's problems couldn't be achieved at the technological level through charkha. He was in favour of an innovative technology involving application of power and small machines which would avoid the pitfalls of centralized production such as concentration of wealth, pollution, unemployment, income disparities and so on, and at the same time. With lower costs and raise his productivity and income of worker, whether working in fields or in small family workshops.

⁹ Limaye M., Mahatma Gandhi and Nehru, A Historical Partnership, (New Delhi: 1990), p.

Conclusion

The discussion so far on the views of Gandhi, Nehru Visvesvaraya and Ram Manohar Lohia on the idea of technology in the context of India's problems and prospects throws up not only issues of difference but also some common elements.

This entire discourse displays widely varying approaches of the understanding of technology. It advances our understanding and technology in that it moves away from technology as a monolithic term to a much more diverse and consequential category.

As we have seen, for Gandhi the industrial technology was not merely a technique of productions distinct in itself but also one, which created the civilization of modern west. He found in its an all pervasive expanse running through society, polity, ethics and obviously the

economy. For him, the rejection of industrialism was also a rejection of the evils which the industrialism bred modern civilization fosters.

Similarly, to Lohia the modern theory of development was essentially an integral discourse of domination. Hence, the technological system forming a part of these developmental processes is influenced by the same logic of domination.

But Nehru and Visvesvaraya saw it in a different light. Nehru believed that the force of industrialism was a historical reality hence it could not be avoided. Instead he argued that the only pragmatic course left was to develop industrially to survive at global level. But he at the same time realized that the capitalist system had failed in eliminating inequality and exploitations. This problem of distribution he believed could be solved socialistic pattern of economic planning. Both Nehru and Visvesvaraya appeared to attribute to technology a neutrality – in contrast with Gandhi and Lohia. For Visvesvaraya unlike Nehru, the socialistic pattern was not a durable pattern – though at certain level of welfare orientation was needed in planning.

Our observations in preceding pages have also revealed a major concern of these thinkers: how to preserve for the common man the status of a subject actively shaping his own destiny.

For instance for Gandhi India's foremost problem was the lack of meaningful engagement for the majority. To which the industrial technology based on heavy mechanization left no answer. On the issue of capital and control Gandhi insisted for a decentralized and feasible system of production. To him a complicated system not only enslaved but also remained distant to the most immediate needs of the common man. He came to a significant understanding about the role of technique of production in sustaining a political structure of decentralized nature. Consequently he argued that only a decentralized technology was capable of creating a true democracy by decentralizing control.

Lohia rather derived to a great extent from Gandhi and hence agreed on the need to formulate a new technological system. Which was to offer liberation not merely to India but to the whole of colored world. He argued for an intermediate technology also because of the consideration of scarcity of capital and abundance of labour in less developed countries.

Both to Gandhi and Lohia a new technological practice in difference to the industrial one would help break subjugation. To Lohia it will be a new or third system, which was still evolving in opposition to the capitalist and communist systems. For Gandhi it was the idea of sarvodaya, which will establish a new human, centered economic practice in opposition to purely profit, based economic laws. Integral to both the ideas was the technological practice.

In contrast Nehru and Visvesvaraya believed in the possibility of amending the industrial system evolved by capitalism. Hence they did not talk in terms of rejecting system altogether but of improving it.

Nehru who ardently stood firm on his belief in industry began rethinking increasingly in terms of an intermediate technology, even though only as immediate measure till the industrial started bearing its fruits.

Similarly Visvesvaraya looked to the model of Japan (smaller machines suitable for workshop kind of production). He visualized a system of district level small-scale industrial organised under the considerations of local resources and demand.

Finally, this study partly problematizes the idea of consensus towards the pursuit of “development” based on industry and science. Implicitly this offers a possibility of applying the ideas of this early 20th century towards a critique of practice and policy today.

Bibliography

Primary Sources

The Collected Works of Mahatma Gandhi. New Delhi: Government of India, Publications Division. To be completed in about 100 volumes, of which over 90 are in print.

Gandhi, M.K. An Autobiography, My Experiments with Truth. Ahmedabad: Navjivan, 1954.

- Delhi Diary. Ahmedabad: Navjivan, 1948.
- Food Shortage and Agriculture. Navjivan, Ahmedabad, 1949.
- For Pacifists. Ahmedabad: Navjivan, 1949.
- From Yervada Mandir. Ahmedabad: Navjivan, 1935.
- Gandhi Marg. Monthly of the Gandhi Peace Foundation. New Delhi.
- Harijan 1933-48. 11 vols. New York: Garland, 1973.
- Hind Swaraj. Ahmedabad: Navjivan, 1962.
- India of My Dreams. Navjivan, 1959 (Revised edition)

- Khadi and Spinning In Villages. Navjivan, 1969.
- Khadi, Why and How. Navjivan, 1969.
- Non-violence in Peace and War. Vol. 1. Ahmedabad: Navjivan, 1948.
- Non-violent Resistance. New York: Schocken Books, 1951.
- The Selected Works of Mahatma Gandhi, Vol. VI, The Voice of Truth. 1995.
- Trusteeship. Navjivan. Ahmedabad, 1994.
- Unto this Last, A Paraphrase. Ahmedabad: Navjivan, 1956.
- Village Swaraj. 1969.
- Village Swaraj. Navjivan, Ahmedabad, 1996.
- Young India 1919-22. Madras: G. A. Ganesan, 1924.
- Constructive Programme, Ahmedabad 1961.

Lohia, Rammanohar, Arthashastra: Marx ke Aage. Allahabad, 1980.

- Fragments of a World Mind. Hyderabad, 1980.
- Itihas Chakra. Lok Bharti Prakashan, Allahabad, 1990.
- Marx, Gandhi and Socialism. Hyderabad, 1963.
- Nirasha Ke Kartabya, Janta Printing Press, Kanpur, 1992.
- Samajvadi Rajniti. Janta Printing Press, Kanpur, 1992.
- Saptakranti. Janta Printing Press, Kanpur, 1990.
- Wheel of History. Lok Bharti Press, Allahabad, 1990.

Visvesvaraya, Sir M., Nation Building. Bangalore Press, Bangalore, 1942.

- Plan for Post-war Reconstruction. Bangalore Press, Bangalore, 1945.
- Planned Economy for India. Bangalore Press, Bangalore, 1937.

Nehru, Jawaharlal, An Autobiography. New Delhi, 1995.

- Selected works. Publication Division. New Delhi., 1995.
- Selected Speeches. Sterling. Delhi, 1989.
- Jawaharlal Nehru Speeches., Publication Division., (In 4 vols.) 1995.

Secondary Sources

Akbar, M. J., Nehru's Mind. Viking, Delhi, 1988.

Alvares, C., Homo Faber, Delhi, 1979.

- Science and Development, 1989.

Brown, Judith M. Gandhi's Rise to Power. Cambridge: Cambridge University Press, 1970.

- Gandhi and Civil Disobedience, The Mahatma in Indian Politics 1928-1934. Cambridge: Cambridge University Press, 1977.

Desai, Mahadev. The Gita According to Gandhi. Ahmedabad: Navjivan, 1956.

Fischer, Louis. A Week with Gandhi. New York: Dull, Sloan and Pearce, 1942.

• Gandhi and Stalin. 1947.

Iyer, Raghavan. The Moral and Political Thought of Mahatma Gandhi. Delhi: Oxford University Press, 1973.

Kripalani, J. B. Gandhian Thought. Bombay: Orient Longmans, 1961.

Kumar, R., Ed. Essays on Gandhian Politics. Oxford: Clarendon Press, 1971.

Limaye, Madhu, Mahatma Gandhi and Nehru, A Historical Partnership. New Delhi, 1990.

Mathur, J. S. and Kumar, Economic Thought of Mahatma Gandhi, Vol. 1, Khadi Economics, 1994.

• Economic Thought of Mahatma Gandhi, Vol. II, Rural Labour and Public Economics, 1994.

Mishra, Gandhian Model of Development and World Peace. Delhi, 1988.

Mukherjee, H., Gentle Colossus, A Study of Nehru, Delhi, 1996.

Nanda B. R., Gandhi and his Critics. Delhi, 1985.

• Gokhale, Gandhi and the Nehrus. London, 1974.

• Mahatma Gandhi: A Biography. Delhi, 1958.

Nandy, Ashis, Traditions, Tyranny and Utopias. Delhi, 1987.

- Science, Hegemony & Violence, Delhi, 1988.

- Intimate Enemy, Delhi, 1991.

Patil, V. P., Problems and Issues in Gandhianism. Delhi, 1990.

Pyarelal. New Horizons. Ahmedabad: Navjivan, 1959.

- Mahatma Gandhi, The Last Phase. 2 vols. Ahmedabad: Navjivan, 1956, 1958.

Ray S., Gandhi, India and World. Bombay, 1970.

Schumacher, F., Small is Beautiful, London, 1973.

Sharad, Onkar, Lohia's Ideas. Lok Bharti Press, Allahabad, 1990.

Myrdal, Gunnar. Asian Drama. London, 1968.

Dutt, R. P., India Today. Bombay, 1947.

Appendix A

From Anthony Parel's *Hind Swaraj and Other Writings* (New Delhi, 1997)

GANDHI ON MACHINERY, 1919-47

No other question treated in *Hind Swaraj*, not even that of the lawyers, doctors and hospitals, has provoked as much controversy as has the question of machinery - in the current idiom, 'technology'. Gandhi's question of machinery underwent gradual development, the main features of which are traced below. (Ed.)

There is thus room in the country for both the mill industry and the handloom weaving. So let mills increase as also spinning-wheels and handlooms. And I should think that these latter are no doubt machines. The handloom is a miniature weaving mill. The spinning-wheel is a miniature spinning-mill. I would wish to see such beautiful little mills in every home. But the country is fully in need to the hand-spinning and hand-weaving industry. Agriculturists in no country can live without some industry to supplement agriculture... Even if we have sufficient mills in the country to produce cloth enough for the whole country, we are bound to provide our peasantry, daily being more and more impoverished, with some supplementary industry, and that which can be suitable to crores of people is hand-spinning and hand-weaving. Opposition to mills or machinery is not the point. What suits our country is the point. I am not opposed to the movement of manufacturing machines in the country, nor to making improvements in machinery. I am only concerned with what these machines are meant for. I am ask, in the words of Ruskin, whether these machines will be such as would blow off a million men in a minute or they will be such as would turn waste land into arable and fertile land. And if legislation were in my hand, I would penalize the

manufacture of labour-saving machines and protect the industry which manufactures nice ploughs which can be handled by every man.

India does not need to be industrialized in the modern sense of the term. It has 750,000 villages scattered over a vast area... The people are rooted to the soil, and the vast majority are living a hand-to-mouth life... pauperism is growing. There is no doubt also that the millions are living in enforced idleness for at least four months in the year. Agriculture does not need revolutionary changes. The Indian peasant requires a supplementary industry. The most natural is the introduction of the spinning wheel, not the handloom. The latter cannot be introduced in every home, whereas the former can, and it used to be so even a century ago. It was driven out not by economic pressure, but by force deliberately used as can be proved from authentic records. The restoration, therefore, of the spinning wheel solves the economic problem of India at a stroke.

... I hope you will not allow yourself to be prejudiced by anything you might have heard about my strange views about machinery. I have nothing to say against the development of any other industry in India by means of machinery, but I do say that to supply India with cloth manufactured either outside or inside through gigantic mills is an economic blunder of the first magnitude, just as it would be to supply cheap bread through huge bakeries established in the chief centres in India and to destroy the family stove'.

"what I object to, is the craze for machinery, not machinery as such. The craze is for what they call labour-saving machinery. Men go on "saving labour" till thousands are without work and thrown on the open streets to die of starvation. I want the concentration of wealth, not in the hands of the few, but in the hands of all. Today machinery merely helps a few to ride on the backs of millions. The impetus behind it all is not the philanthropy to save labour, but greed. It is against this constitution of things that I am fighting with all my might.

... scientific truths and discoveries should first of all cease to be the mere instruments of greed. Then labourers will not be over-worked

and machinery instead of becoming a hindrance will be a help. I am aiming, not at eradication of all machinery, but limitations...

The supreme consideration is man. The machine should not tend to make atrophied the limbs of man. For instance, I would make intelligent exceptions. Take the case of the Singer Sewing Machine. It is one of the few useful things ever invented, and there is a romance about the device itself. Singer saw his wife labouring over the tedious process of sewing and seaming with her own hands, and simply out of his love for her he devised the sewing machine, in order to save her from unnecessary labour...

It is an alteration in the condition of labour that I want. This mad rush for wealth must cease, and the labourer must be assured, not only of a living wage, but a daily task that is not a mere drudgery. The machine will, under these conditions, be as much a help to the man working it as to the State, or the man who owns it. The present mad rush will cease, and the labourer will work... under attractive and ideal conditions... Therefore, replace greed by love and everything will come right.'

I hold that the machinery method is harmful when the same thing can be done easily by millions of hands not otherwise occupied... Western observers hastily argue from Western conditions that what may be true of them must be true of India where conditions are different in so many material respects. Applications of the laws of economics vary with varying conditions.

The machinery method is no doubt easy. But it is not necessarily a blessing on that account... If the craze for the machinery method continues, it is highly likely that a time will come when we shall be so incapacitated and weak that we shall begin to curse ourselves for having forgotten the use of the living machinery given to us by God:

CW 47:89-90).

1934

‘Machinery is grand yet awful invention. It is possible to visualize a stage at which the machines invented by man may finally engulf civilisation. If man controls the machines, then they will not; but should man lose his control over the machines and allow them to control him, then they will certainly engulf civilisation and everything.’

CW 48:353

‘When as a nation we adopt the spinning-wheel, we not only solve the question of unemployment but we declare that we have no intention of exploiting any nation, and we also end exploitation of the poor by the rich... When I say I want independence for the millions, I mean to say not only that the millions may have something to eat and to cover themselves with, but that they will be free from the exploitation of people here and outside. We can never industrialize India, unless, of course, we reduce our population from 350 millions to 35 millions or hit upon markets wider than our own and dependent on us. It is time we realized that, where there is unlimited human power, complicated machinery on a large scale has no place... We cannot industrialize ourselves, unless we make up our mind to enslave humanity.’

(CW 58: 400).

1935

‘Machinery well used has to help and ease human effort. The present use of machinery tends more and more to concentrate wealth in the hands of few in total disregard of millions of men and women whose bread is snatched by it out of their mouths.’

(CW 61:416)

Responding to a Japanese correspondent who asked whether Gandhi was against this machine age:

“To say that is to caricature my views. I am not against machinery as such, but I am totally opposed to it when it masters us... Q. “You would indeed, in my sense of the term. The village communities should be revived. Indian villages produced and supplied to the Indian towns and cities all their wants. Indian became impoverished when our cities became foreign markets and began to drain the villages dry by dumping cheap and shoddy goods from foreign lands.’

(CW 64:118)

“We should not use machinery for producing things which we can produce without its aid and have got the capacity to do so. As machinery makes you its slave, we want to be independent and self-supporting; so we should not take the help of machinery when we can do without it. We want to make our villages free and self-sufficient and through them achieve our goal - liberty - and also protect it. I have no interest in the machine nor (do) I oppose it. If can produce my things myself, I become my master and so need no machinery.’

(CW 71:383)

Here Gandhi makes the connection between machinery and violence. (Ed).

‘Another danger in making more and more use of machinery is that we have to make great efforts for the protection of it, that is to say, we shall have to keep an army as is being done today elsewhere in the world. The fact is that even if there is no danger of aggression from outside we shall be slaves to those who will be in control of the big machinery. Take the case of the atom bomb. Those nation who have atom bombs are feared even by their friends. If we take a wise view, we shall be saved from the working of machinery’.

(CW 82:132-3)

1946

Gandhi's definition of a machine, as given in his address to the Indian Industries Ministers' Conference, Poona, The text of the address is not available. The following is taken from a report on it published in CW 85:95. (Ed.).

'Ours has been described as the machine age, because the machine dominates our economy. Now, . What is a machine? - one may ask. In a sense, man is the most wonderful machine in creation. It can be neither duplicated nor copied.

He (Gandhi) had, however, used the word not in its wider sense but in the sense of an appliance that tended to displace human or animal labour instead of supplementing it or merely increasing its efficiency. That was the first differentiating characteristic of the machine. The second characteristic was that there was no limit to its growth or evolution. That could not be said of human labour. There was no limit of human labour. There was no limit beyond which its capacity or mechanical efficiency could not go. Out of this circumstance arose the third characteristic of the machine. It seems to be possessed of a will or genius of its own. It was antagonistic to man's labour. This it tended more to displace man, one machine doing the work of a hundred, if not a thousand, who went to swell the army of the unemployed and the under-employed, not because it was desirable but because that was its law.'

Appendix B

From Madhu Limaye's *Historical Partnership*,
1990, New Delhi

My dear Jawaharlal,

I have been desirous of writing to you for many days but have not been able to do so before today. The question of whether I should write to you in English or Hindustani was also in my mind. I have at length preferred to write to you in Hindustani.

The first thing I want to write about is the difference of outline between us. If the difference is fundamental then I feel the public should also be made aware of it. It would be detrimental to our work for Swaraj to keep them in the dark. I have said that I still stand by the system of Government envisaged in Hind Swaraj. These are not mere words. All the experience gained by me since 1908 (sic) when I wrote the booklet has confirmed the truth of my belief. Therefore if I am left alone in it I shall not mind, for I can only bear witness to the truth as I see it. I have not Hind Swaraj before me as I write. It is really better for me to draw the picture a new in my own words. And whether it is the same as I drew in Hind Swaraj or not is immaterial for both you and me. It is not necessary to prove the rightness of what I said then. It is essential only to know what I feel today. I am convinced that if India is to attain true freedom and through India the

world also, then sooner or later the fact must be recognized that people will have to live in village, not in towns, in huts, not in places. Crores of people will never be able to live at peace with each other in towns and places. They will then have no recourse but to resort to both violence and untruth. I hold that without truth and non violence there can be nothing but destruction for humanity. We can realize truth and non-violence only in the simplicity of village life and this simplicity can best be found in the Charkha and all that the Charkha connotes. I must not fear if the world today is going the wrong way. It may be that India too will go that way and like the proverbial moth burn itself eventually in the flame round which it dances more and more furiously. But it is my bounden duty up to my last breath to try to protect India and through India the entire world from such a doom. The essence of what I have said is that man should rest content with what are his real needs and become self-sufficient. If he does not have this control he cannot save himself. After all the world is made up of individuals just as it is the drops that constitute the ocean. I have said nothing new. This is a well known truth.

But I do not think I have stated this in Hind Swaraj. While I admire modern science, I find that it is the old looked at in the true light of modern science which should be re clothed and refashioned aright. You must not imagine that I am envisaging our village life as it is today. The village of my dreams is still in my mind. After all every man lives in the world of his dreams. My ideal village will contain intelligent human beings. They will not live in dirt and darkness as animals. Men and women will be free and bale to hold their own against any one in the world. There will be neither plague, nor cholera nor smallpox; no one will be idle, no one will wallow in luxury. Everyone will have to contribute his quota of manual labour. I do not want to draw a large scale picture in detail. It is possible to envisage railways, post and telegraph offices etc. For me it is material to obtain the real article and the rest will fit into the picture afterwards. If let go the real thing, all else goes.

On the last day of the Working Committee it was decided that this matter should be fully discussed and the position clarified after a two

or three days session. I should like this. But whether the Working Committee sits or not I want our position vis-a-vis each other to be clearly understood by us for two reasons. Firstly, the bond that unites us is not only political work. It is immeasurably deeper and quite unbreakable. Therefore it is that I earnestly desire that in the political field also we should understand each other clearly. Secondly neither of us thinks himself useless. We both live for the cause of India's freedom and we would both gladly die for it. We are not in need of the world's praise. Whether we get praise or blame is immaterial to us. There is no room for praise in service. I want to live to 125 for the service of India but I must admit that I am now an old man. You are much younger in comparison and I have therefore named you as my heir. I must, however, understand my heir and my heir should understand me. Then alone shall I be content.

If you feel you should meet me to talk over what I have written we must arrange a meeting.

You are working hard I hope you are well. I trust Indu Indira Gandhi too it fit.

Blessings from

BAPU

Nehru's reply to Gandhi

Anand Bhawan, Allahabad

My dear Bapu,

I have received today, on return from Lucknow, your letter of the 5th October. I am glad you have written to me fully and I shall try to reply at some length but I hope you will forgive me if there is some delay in this, as I am at present tied up with close-fitting engagements. I am only here now for a day and a half. It is really better to have informal talks but just at present I do not know when to fit this in. I shall try.

Briefly put, my view is that the question before us is not one of truth versus untruth or non-violence versus violence. One assumes as one must that true cooperation and peaceful methods must be aimed at, and a society, which encourages these, must be our objective. The whole question is how to achieve this society and what its content should be. I question is how to achieve this society and what its content should be. I do not understand why a village should necessarily embody truth and non-violence. A village, normally speaking, is backward intellectually and culturally and no progress can be made from a backward intellectually and culturally and no progress can be made from a backward environment. Narrow-minded people are much more likely to be untruthful and violent.

Then again we have to put down certain objectives like a sufficiency of food, clothing, housing, education, sanitation etc. which should be the minimum requirements for the country and for everyone. It is with these objectives in view that we must find out specifically how to attain them speedily. Again it seems to me inevitable that modern means of transport as well as many other modern developments must continue and be developed. There is no way out of it except to have them. If that is so, inevitably a measure of heavy industry exists. How far will that fit in with a purely village society? Personally I hope that heavy or light industries should all be decentralized as far as possible and this is feasible now because of the development of electric power. If two types of economy exist in the country there should be either conflict between the two or one will overwhelm the other.

The question of independence and protection from foreign aggression, both political and economic, has also to be considered in this context. I do not think it is possible for India to be really independent unless she is a technically advanced country. I am not thinking for the moment in terms of just armies but rather of scientific growth. In the present context of the world we cannot even advance culturally without a strong background of scientific research in every department. There is today in the world a tremendous acquisitive tendency both in individuals and groups and nations, which leads to conflicts and wars. Our entire society is based on this more or less. That basis must go

and be transformed into one of cooperation, not of isolation which is impossible. If this is admitted and is found feasible then attempts should be made to realize it not in terms of an economy, which is cut off from the rest of the world, but rather one, which cooperates. From the economic or political point of view an isolated India will be a kind of vacuum which increases the acquisitive tendencies of others and thus creates conflicts.

There is no question of places for millions of people. But there seems to be no reason why millions wholes not have comfortable up-to-date homes where they can lead a cultured existence. Many of the present overgrown cities have developed evils, which are deplorable. Probably we have to discourage this overgrowth and at the same time encourage the village to discourage this overgrowth and at the same time encourage the village to approximate more to the culture of the town.

It is many years ago since I read Hind Swaraj and I have only a vague picture in my mind. But even when I read it 20 or more years ago it seemed to me completely unreal. In your writings and speeches since then I have found much that seemed to me an advance on that old position and an appreciation of modern trends. I was therefore surprised when you told us that the old picture still remains intact in your mind. As you know, the Congress has never considered that picture, much less adopted it. You yourself have never asked it to adopt it except for certain relatively minor aspects of it. How far it is desirable for the Congress to consider these fundamental questions, involving varying philosophies of life, it is for you to judge. I should imagine that a body like the Congress should not lose itself in arguments over such matters, which can only produce great confusion in people's minds resulting in inability to act in the present. This may also result in creating barriers between the Congress and other sin the country. Ultimately of course this and other question will have to be decided by representatives of free India. I have a feeling that most of these questions are thought of an discussed in terms of long ago, ignoring the vast changes that have taken place all over the world during the last generation or more. It is 38 years since Hind Swaraj was written. The world has completely changed since then, possibly in

a wrong direction. In any event any consideration of these questions must keep present facts, forces and the human material we have today in view, otherwise it will be divorced from reality. You are right in saying that the world, or a large part of it, appears to be bent on committing suicide. That may be an inevitable development of an evil seed in civilisation that has grown. I think it is so. How to get rid of this evil, and yet how to keep the good in the present as in the past is our problem. Obviously there is good too in the present.

These are some random thoughts hurriedly written down and I fear they do injustice to the grave import of the question raised. You will forgive me, I hope, for this jumbled presentation. Later I shall try to write more clearly on the subject.

I hope you are keeping well and have completely recovered from the attack of influenza.

Yours affectionately,

JAWAHARLAL