

TRIBUTE

DD Kosambi Blazed a New Trail, Let's Follow It

Wednesday 27 June 2007, by [SEN Arindam](#) (Date first published: 25 June 2007).

Contents

- [A Short but Highly Productive](#)
- [Historical and Sociological](#)

This 31 July we celebrate the birth centenary of an eminent mathematician who navigated a very uncommon and exciting route to become a versatile scientist, pioneer in Marxian Indology, political analyst and peace activist. The brief biographical sketch and excerpts from his autobiographical notegiven below shows us how he moved gracefully and confidently between different domains of theory and practice and combined them to develop a healthy, holistic, dynamic approach to life.

But it is not simply because the Centenary is at hand that we remember Kosambi. Ten years ago when we decided to hold a series of seminars on contemporary questions of Marxist praxis under the auspices of the newly founded Indian Institute of Marxist Studies (IIMS), we needed a personality to symbolise or represent our spirit of research, and we could think of none other than this brilliant Marxist scholar. In an article "Introducing DD Kosambi Memorial Lectures" (*Liberation*, April 1996) IIMS director Arindam Sen observed:

"He categorically declared that his was the Marxist method, but firmly opposed the pseudo-Marxist straitjacketing of history. On the strength of his own research he rejected or modified certain of Marx's ill-informed observations on Indian history. One may or may not always agree with all his views. But there is no denying that without this scientific daring, it would have never been possible for him to break new grounds."From these two great men (Marx and Engels — AS) I had learnt the questions to be asked", wrote he,"and then for the answers went over to field studies, for the required materials were not available in print."

This was the spirit characteristic of DDK. ... we must carry forward this intense urge for posing correct questions and finding new answers ... and this is the spirit that underlies the forthcoming DD Kosambi Memorial lectures."

The seminars focussed on the following topics, and each of them presented us with an occasion to remember and emulate Kosambi:

- * Marxist Approach to Class and Caste (Hyderabad, 26 January 1997)
- * Economic Nationalism (Delhi, 20 January 1997)
- * Panchayati Raj (Calcutta, 3 February 1997)
- * Marxism and Women's Liberation (Bangalore, 1 March 1997)

* Land Reform in Bihar (Patna, 13 April 1997)

* Jharkhand Movement and the Left (Ranchi, 26 April 1997)

Around the same time, comrade Arvind N. Das, noted Marxist scholar and one of the founder members of IIMS, paid tributes to DDK in the form of a documentary film on his life and work. Titled 'India Invented', this 13-part documentary is available at <http://video.google.com>. The film was screened for a few weeks on Doordarshan, but was then suddenly stopped. Nearly four decades after his death, Kosambi was still too hot for the powers that be.

A Short but Highly Productive Life

Damodar Dharmananda Kosambi was born in Kosben, Goa, which was then under Portuguese rule. His father Dharmananda Damodar Kosambi was a Buddhist and Pali scholar. After a few years of schooling in India, in 1918 Damodar and his elder sister Manik went to Massachusetts with their father, who was assisting Harvard University professors in compiling a critical edition of the Visuddhimagga, a book on Buddhist philosophy. There he spent a year in the Grammar school and was then admitted to the Cambridge High and Latin School in 1920. He became a member of the Cambridge Branch of American Boy Scouts.

Damaodar joined the Harvard university in 1924, but had to return to India with his father. In January 1926, he returned to the US with his father, who once again worked in Harvard University for a year and a half. In 1929, Harvard awarded him the Bachelor of Arts degree with a summa cum laude. He was also granted membership to the esteemed Phi Beta Kappa Society, the oldest undergraduate honours organization in the United States.

He returned to India soon after and joined the Banaras Hindu University (BHU). There he taught German along with Mathematics. In 1931, he got married to Nalini Madgaonkar and joined the Aligarh Muslim University. During his two years' stay in Aligarh, he produced eight research papers on Differential Geometry and Path Spaces. His fluency in several European languages allowed him to publish some of his early papers in French, Italian and German journals in the respective languages. In 1933, he joined the Deccan Education Society's Fergusson College in Pune, where he taught mathematics for the next 12 years.

In 1945, Homi J. Bhabha invited Kosambi to join the Tata Institute of Fundamental Research (TIFR) as Professor of Mathematics, which he accepted. After independence, in 1948-49 he was sent to England and the US as a UNESCO Fellow to study the theoretical and technical aspects of the computer. He worked at the TIFR till 1962, when the authorities - obviously because of his communist convictions and outspoken admiration for socialist China - refused to renew the service contract with him.

Kosambi never joined the Communist Party and was highly critical of "official Marxists" (see below). In mid-1966 he had an attack of myocardial infarct and passed away on 29 June - "prematurely and almost surreptitiously", as his friend VV Gokhale wrote later. But the legacy he left behind will forever inspire us to go ahead in bold, painstaking, Marxist research.

Steps in Science

This was the title Kosambi chose for his autobiographical note. He started with the question: 'Why science'? And the reply was that he had opted for a career in science in the first place because there lay the key to progress, a key that his motherland had long ago lost to the West. The Marxist approach to science stands out in bold relief in his statement: "science is the cognition of necessity,

freedom is the recognition of necessity." His feelings on a personal encounter with Einstein, whom he called "the passionate adventurer" sheds light on his spirit of continuous search and research:

"In 1949 Einstein pointed out to me during one of several long and highly involved private technical discussions that certain beautifully formulated thesis of his would mean that the whole universe consisted of no more than two charged particles. Then he added with a rueful smile, 'perhaps I had been working on the wrong lines, and the nature does not obey differential equations after all.' If a scientist of his rank could face the possibility that his entire life-work might have to be discarded, could I insist that the theorems whose inner beauty brought me so much pleasure after heavy toil must be of profound significance in natural philosophy?"

The creative urge that never rests and always presses a scientist forward led Kosambi to the application of modern probability theory and statistical methods to other branches of science - both natural and social. One was genetics: his formula for chromosome distance (Kosambi's Map Function). Another was in the field of statistics: the widely known technique called Proper Orthogonal Decomposition (POD). Although it was originally developed by Kosambi in 1943, it came to be referred to as the Karhunen-Loeve expansion. In the 1943 paper entitled 'Statistics in Function Space' presented in the *Journal of the Indian Mathematical Society*, Kosambi presented the Proper Orthogonal Decomposition some years before Karhunen (1945) and Loeve (1948). This tool found application to such diverse field as image processing, signal processing, data compression, oceanography, chemical engineering and fluid mechanics. Unfortunately this most important contribution of his is rarely acknowledged. In recent years though, it is heartening to note that some authors have indeed referred to it as the Kosambi-Karhunen-Loeve decomposition. Among his other contributions, mention must be made of the painstaking research on coins that made the numismatics of hoards into an exact science.

He showed genuine awareness of the interaction between science and social processes particularly in the context of the under-developed countries. Intensely concerned with people's well-being and national progress, he offered valuable practical solutions on better use of bagasse (sugarcane pulp) by fermenting it and deriving fuel gas, fertiliser and other by-products; on tapping the great potential of solar energy in India, particularly cheap solar cookers, and campaigned for smaller dams as against big ones favoured by Nehru, and so on. Nobody paid attention, though. By contrast, scientific progress in the USSR greatly impressed him: "... even the purest of pure science flourishes at its best when it develops in harmony and sympathy with its surroundings."

Historical and Sociological Work

Among Kosambi's contributions in these fields, the two most important are: *Exasperating Essays: Exercise in the Dialectical Method* (1957) and *The Culture and Civilisation of Ancient India in Historical Outline* (1965). The former is a thin collection of essays on contemporary as well as historical topics. The latter represents his most mature treatment of the subject. Pathbreaking in the truest sense of the term, these works were - and are - highly acclaimed in India and abroad. His editions of the poetry of Bhartrihari and of the oldest known Sanskrit anthology - Subhashitara tnakosha - are acknowledged land-marks in Indian text-criticism.

"Learning from history is never simply a one-way process. To learn about the present in the light of the past also means to learn about the past in the light of the present. The function of history is to promote a profound understanding of both past and present through the interrelation between them." [1]

As a historian, Kosambi revolutionised Indian history writing with his Marxist approach, crucially

diverting from the mainstream nationalist and imperialist schools. He understood history in terms of the dynamics of socio-economic formations rather than just a chronological narration of "episodes" or the feats of a few great men - kings, warriors or saints. In the very first paragraph of his classic work, *An Introduction to the Study of Indian History*, he gives an insight into his methodology and point of departure:

"The light-hearted sneer 'India has had some episodes, but no history' is used to justify lack of study, grasp, intelligence on the part of foreign writers about India's past. The considerations that follow will prove that it is precisely the episodes — lists of dynasties and kings, tales of war and battle spiced with anecdote, which fill school texts — that are missing from Indian records. Here, for the first time, we have to reconstruct a history without episodes, which means that it cannot be the same type of history as in the European tradition."

Some of Kosambi's observations are debatable, while a few seem to be patently wrong. To take one instance, he wrote in 1954, *"Talk of fighting feudalism today is on a level with talk of fighting dinosaurs. No part of the mechanism of coercion is now in feudal hands. The legislature is bourgeois (and petty bourgeois) in composition. The armed forces, the police, the judiciary are all directly under bourgeois control, where these functions would formerly have been carried out by feudal levies, retainers, or the feudal lords themselves. Even the beginnings of capitalist production in agriculture may be seen...The liquidation of Indian feudalism, then, is general and complete..."* [2]

But such flaws pale into insignificance when compared to the great creative Labour he put into the historical researches, his highly original and thought-provoking findings, and above all, his thoroughly scientific methodology which remains a model for us to this day. So much for our own observations; let us now go over to a sample survey from Kosambi's historical, sociological and political writings.

From Steps in Science

"To teach myself statistics, I had to take up some practical problems from the very beginning. One such was the study of examination marks of students. ... A more fruitful problem was the statistical study of punch marked coins. Arranging coin-groups in order of time led naturally to the question: Who struck these coins? ... The written sources display a shocking discordance. The Puranas, Buddhist and Jain records often give different names for the same king. Study of the records meant some mastery of Sanskrit, of which I had absorbed a little through the pores without regular study. Other preoccupations made it impossible to spend as much time as the average student on the classical idiom. So, the same method was adopted as for study of statistics: to take up a specific work, of which the simplest was Bhartrhari's epigrams (Subhasitas). The supposed philosophy of Bhartrhari, as glorified by the commentators, was at variance with his poetry of frustration and escape. By pointing this out in an essay, which made every Sanskritist who read it shudder, I had fallen into Indology, as it were, through the roof. ...

My judgment of the class character of Sanskrit literature has not become less harsh, but I can at least claim to have rescued over fifty poets from the total oblivion to which lovers of Sanskrit had consigned them, not to speak of adding to our meagre knowledge of many others.

All this gave a certain grasp of Sanskrit, but hardly of ancient Indian history; the necessary documents simply did not exist. ...Clearly, one of two positions had to be taken. India has no history at all, or some better definition of history was needed. The latter I derived from the study of Karl Marx, who himself expressed the former view. History is the development in chronological order of successive changes in the means and relations of production. This definition will have to be abandoned for a better one if we cross the threshold to a radically new and better form of society. Then and only then will human history really begin, but till that time my definition will have to serve.

We have, therefore an Indian history without the episodes that fill the history books of other countries. But where were the relevant new sources? Granted that the plough is more important than a list of kings, when and where was it first introduced? What class took the surplus produced thereby? Archaeology provided some data, but I could get a great deal more from the peasants. Fieldwork in philology and social anthropology had to be combined with archaeology in the field as distinguished from the site archaeology of a 'dig'. Our villagers, low-caste nomads and tribal minorities live at a more primitive stage than the city people or even than the brahmins who wrote the Puranas. Their cults, when not masked by brahmin identification with Sanskritized deities, go back to pre-history, just as Romans at their sacrifices used stone axes and bronze knives. Tracing a local god through village tradition gives a priceless clue to ancient migrations, primitive tracks, early trade routes and the merger of cattle-breeding tribesmen with food gatherers, which led to firm agricultural settlement. The technique of observation has to be developed afresh for every province in India. ...

The[se] conclusions have had a mixed reception because of reference to Marx, which automatically classifies them as dangerous political agitation in the eyes of many. At the same time official Marxists look with suspicion upon the work of an outsider. ...

From The Function of Leadership in a Mass Movement

"...This view [dialectical materialism] claims that a change of quantity inevitably leads to a change of quality. Water cooled indefinitely will not remain a fluid, but must solidify into ice when enough heat has been lost; the same liquid, when it has absorbed enough heat, will be transformed into gas, steam. Similarly, when the contradictions latent in any form of production develop, the form of society will inevitably change. This is simple enough, but the circumstances that prevail at the critical point need further examination. First, there is a minimum or threshold value below which no transformation can possibly take place. Secondly, this threshold value can be surpassed, sometimes to a surprising extent, if certain conditions, which are otherwise insignificant, do not obtain. To give an illustration: we can never get the solution of a given salt to solidify, i.e., change to a mass of crystals, unless the solution is concentrated. But supersaturated solutions can always be obtained with a little care. If a small crystal be added to such a supersaturated solution, the whole mass will crystallize, often with amazing rapidity. The small parent crystal, which does not appreciably increase the percentage of super saturation of the total solution, is necessary for crystallization. ...

I submit that this analogy explains the position of leadership in a social movement. Below the threshold level of objective conditions in the society as a whole, little can be done. But good leadership recognizes when this level has been surpassed, and can produce the desired transformation with very little super saturation. Of course, if the social forces are strong enough, they can overcome the handicap of an indifferent or even bad leadership, but the entire process of transformation must naturally take place at a correspondingly later stage of development.

It is this postulation that explains why the communist revolution was successful in Russia, but failed in Germany where Marx and Engels expected it to occur first because of greater concentration of productivity. Trotsky, in his history of the Russian revolution, says, "...Lenin was not a demiurge of the revolutionary process,...he merely entered into a chain of objective historic forces. But he was a great link in that chain." Our present analogy seems to me more constructive than that of a chain. Lenin recognized that the war of 1914 was a purely imperialist clash; he alone insisted upon carrying out the resolution of the second international, which suggested the conversion of such an outbreak into civil war. It was he, of all the socialists in Russia, who first recognized the true function of the soviets as the organ of the proletariat, and brushed aside the wobbling theorists who postulated an intermediate bourgeois-liberal democratic stage in the development of the revolution. His letter [3] drove the communists to armed insurrection on November 7, 1917; the time was ripe

for such procedure in the seizure of power, and probably no other method could then have been as effective. Not only in the beginning, but even in after years, when the revolution had to be saved by strategic retreats such as unfavourable treaties with hostile aggressors and the New Economic Policy, Lenin showed what leadership can really accomplish. The older revolutionaries in Europe, i.e. Hungary, Germany, Italy etc. were lost not simply because the social conditions were relatively less favourable, but because the guiding spirits were less able. On the other hand, we may note that Lenin himself, in his Geneva exile, could not shake the complacent inertia of the Swiss working class. ...

Finally, we have seen cases of leadership by dispersion as well as leadership that concentrates social forces. This often happens when a class not in power gains its predominance by uniting with a lower class, which it must normally exploit. In that case, methods have to be devised for the dissipation of the excess of energy available; methods that usually come with the label of "restoration of law and order". Some Marxists (of whom I am one) claim that a part of the leadership of Mahatma Gandhi must fall under this head. When the 1930 Satyagraha got out of hand and was about to be transformed into a fundamentally different movement by the no-rent and no-tax campaigns in 1932, he discovered the need for the uplift of our untouchables, and the whole movement was neatly sidetracked. At Rajkot this year, he put himself at the head of a campaign that would have lighted a fire not easily put out in the handling of our social discontent; and that too was effectively sidetracked by newer and finer points in the theory of nonviolence—points of a purely theological minuteness. Both of these had a precursor in the cancellation of the first civil disobedience movement after Chauri-Chaura. But in the two later cases, it was quite clear that the forces of social change were scattered precisely at a stage when their continued focusing would have been dangerous to the class that wanted power, the Indian money-owners. ...

At least one difference exists between a social group and the solutions that we have used for the purposes of analogy: the lack of uniformity. The concentration in a social movement need not be the same throughout the whole region affected. This leads to two distinct types of development after the initial stages. Either the transformation that has taken place in a small portion will spread over the rest of the social group which again implies the existence of a minimum threshold value over the entire aggregation, or there will be produced a de-concentration, a rarefaction as it were, over the untransformed portion. In the latter case, the transformed portion must temporarily insulate itself, or again dissolve into its surroundings. I take it that this will explain why the Marxist revolution in one part of the world did not spread with the rapidity that was expected of it. Its very occurrence in that part sharpened the contradictions that existed elsewhere; but it threw hesitant leaders back into a reactionary attitude, because they had not themselves developed to the necessary level."

On Marxism and the Official Marxists

"Certain opponents of Marxism dismiss it as an outworn economic dogma based upon 19th century prejudices. Marxism never was a dogma. There is no reason why its formulation in the 19th century should make it obsolete and wrong, any more than the discoveries of Gauss, Faraday, and Darwin, which have passed into the body of science. Those who sneer at its 19th century obsolescence cannot logically quote Mill, Burke, and Herbert Spencer with approval, nor pin their faith to the considerably older and decidedly more obscure Bhagwad Gita. The defense generally given is that the Gita and the Upanishads are Indian; that foreign ideas like Marxism are objectionable. This is generally argued in English, the foreign language common to educated Indians; and by persons who live under a mode of production (the bourgeois system) forcibly introduced by the foreigner into India. The objection, therefore, seems less to the foreign origin than to the ideas themselves, which might endanger class privilege. Marxism is said to be based upon violence, upon the class-war, in which the very best people do not believe nowadays. They might as well proclaim that meteorology

encourages storms by predicting them. No Marxist work contains incitement to war and specious arguments for senseless killing remotely comparable to those in the divine Gita.

From the opposite direction, the Indian official Marxists (thereafter called OM) have not failed to manifest their displeasure with an interloper's views. These form a decidedly mixed category, indescribable because of rapidly shifting views and even more rapid political permutations and combinations. The OM included at various times several factions of the CPI, the Congress Socialists, the Royists, and numerous left splinter groups. Their standard objection has been that such writings are "controversial". If consistently pressed, this would also exclude the main work of Marx, Engels, Lenin, the best of Stalin and Mao Tse-tung. The only successful way of dealing with adverse views presented in all good faith is a careful detailed and factual answer. The OMMarxism has too often consisted of theological emphasis on the inviolable sanctity of the current party line, or irrelevant quotations from the classics.

Marxism cannot, even on the grounds of political expediency or party solidarity, be reduced to a rigid formalism like mathematics. Nor can it be treated as a standard technique such as work on an automatic lathe. The material, when it is present in human society, has endless variations; the observer is himself part of the observed population, with which he interacts strongly and reciprocally. This means that the successful application of the theory needs the development of analytical power, the ability to pick out the essential factors in a given situation. This cannot be learned from books alone. The one way to learn it is by constant contact with the major sections of the people. For an intellectual, this means at least a few months spent in manual labour, to earn his livelihood as a member of the working class; not as a superior being, nor as a reformist, nor as a sentimental "progressive" visitor to the slums. The experience gained from living with workers and peasants, as one of them, has then to be constantly refreshed and regularly evaluated in the light of one's reading. ..."

[From *Introduction to Exasperating Essays*]

From *On the Revolution in China*

"No honest and reasonably alert visitor to China can fail to be impressed by the remarkable changes in the country and the people. ... New factories, mines, oil fields, steelworks, dams, co-operatives, roads, buses, hospitals, schools, cultural palaces, theatres have sprouted virtually overnight. Literacy is almost universal and the language is being reformed. The rise in the general standard of living is equally remarkable. ... But far more remarkable than all these are the changes among the people themselves.... Many enterprises function very well under joint state and private ownership. There is no question of surrender to capitalism; yet the capitalists have not been "liquidated" by shooting, but converted into useful citizens.

These features of contemporary Chinese society must be in some way, traceable to the course of its revolution, which we proceed to analyze, in order to explain this extraordinary new civilization....

M.N.Roy, writing on *Revolution and Counter-revolution in China* (1946) to justify those actions of his that had led to his expulsion from the Comintern, reached the conclusion that the Chinese revolution did not follow a pattern, which could be approved by Marxists. He said that the "so-called Communist Party of China" preferred to base itself on "the village paupers, necessarily inclined towards banditry". "Having learned from experience, the Communists in China today are communists only in name". The refusal to learn anything from experience, and the insistence upon keeping the name unsullied by effective action are characteristic of Roy's type of OM. While accusing the communist leaders in China of "relapse into opportunism which may be justified as clever strategy", Roy had not discovered the existence of Mao Tse-tung in 1930, and even in 1946

dismissed Chairman Mao's united national front as another "doctrinaire preoccupation." The task of the revolution in colonial and semi-colonial countries now (1946) is to establish "Radical Democracy" — a task in which Roy himself failed dismally on his return to India while the bourgeois colonial struggle was being fought out and won under the leadership of the Congress, without benefit of Roy. As late as 1951, the CPI portentously reserved final judgment upon the Chinese revolution, on the grounds that the whole affair might turn out to be reformist in character, compared with the purity of the struggle in India. Other Indians, formerly OM continue to ignore China, and devote their energies to such urgent problems as the woes of Yugoslavia or Hungary."

On CPI's Attitude to Congress and Muslim League

"The OM thesis at this time [early and mid-forties - AS] was that the British would never transfer power to the Indian National Congress. The OM solution was that the Hindus and the Muslims, somehow equated to the Congress and the Muslim League, should unite to throw out the foreign imperialists. The question of the class structure behind the two parties was never openly raised, perhaps because the writings of W. Cantwell Smith led the OM to believe that the Muslim League was, in some mysterious way, at heart anti-British and on the road to socialism. One sure test of effective anti-imperialism, namely how many of the leaders were jailed or executed by the rulers of empire, was not applied.

The intransigence and the open alliance with the British, so profitable to the leading personalities in the League, and the insistence upon the "two nations" theory were dutifully ignored. No emphasis has been laid upon the total disruption of advanced peasant movements in the Punjab and in Bengal by the 1947 separation of Pakistan. For that matter, the OM had dismissed the Satara peasant uprising (prati sarkar) of 1942-43 as pure banditry.

[From Kosambi's supplementary remarks to the essay *The Bourgeoisie Comes of Age in India* (1948), when it was published in the collection *Exasperating Essays* (1957) [\[4\]](#)

From *On the Class Structure of India*

Nationalism, and its logical extension provincialism, are manifestations of the bourgeoisie. In the feudal period, the Peshwas defeated the Nizam more than once, but saw nothing wrong in leaving Marathi-speaking regions in the Nizam's possession. The political reorganization of India on a linguistic basis into new states was thus an index of bourgeoisie development and competition. The inviolability of private property as guaranteed by the Constitution no longer suffices. Each local bourgeoisie wants full political control over its own hinterland to safeguard investments and to exclude powerful competitors. This was seen in the bitter strife over the creation—not even by pretence of freely expressed public opinion, but by police action—of the new, enlarged, hybrid, anomalous, bi-lingual state of Bombay. The quarrel passed off as one between Gujarathi and Maharashtrian. The real fight, however, was between the veteran, entrenched capital of Bombay city, and the newer money of Ahmedabad. ...

From *Imperialism and Peace*

"The peace we want means true democracy. The experience of millennia has shown us that no other kind of peace will last. No man shall claim to be another's master whether by divine right, the right of birth, the right of armed conquest, or the right vested in accumulated private property. Such rights can only be exercised by fraud and violence against the vast majority of the people, by destroying the very foundations of peace, namely, truth and justice. The lowest in the land must raise himself to full stature as an individual member of a great society. He must exercise in full, by actual participation in governing himself and others, his right to receive according to his needs, his duty to contribute according to his ability. Formal recourse to the ballot box for a periodic but ineffective change of masters will not suffice. ...

The people of China rejected, in favour of democracy, the aggressive leadership of Chiang Kai-shek [who] was so amply supplied with foreign arms and money. But the only lesson imperialism can draw from these rebuffs is that puppets are unreliable, that open intervention is a far better road to conquest—provided the other side is poorly armed. The Pax Romana and the Pax Britannica should now be replaced by a dollar peace, the Pax Americana. ...

The peace movement cannot deny to any people the right to revolution (including counter-revolution), nor even the right to wage civil war. It can only demand that no nation's armed forces should go into action upon foreign territory. That is aggression even when it dons the cover of "defence", restoration of law and order, or a forced vote in the United Nations. The purpose of the United Nations was to settle all international differences without war, not to provide a joint flag for the ancient imperialist "police actions."...

P.S.

* From *Liberation*, July 2007.

Footnotes

[1] Quoted by Kosambi in his *The Culture and Civilisation of Ancient India in Historical Outline*, p 24, from EH Carr's *What is History?*

[2] From *On The Class Structure of India* (1954).

[3] See *Liberation*, November 2001 for an abridged and annotated text of this letter - Ed..

[4] For extensive quotes from this article, see *Liberation*, September 1997.