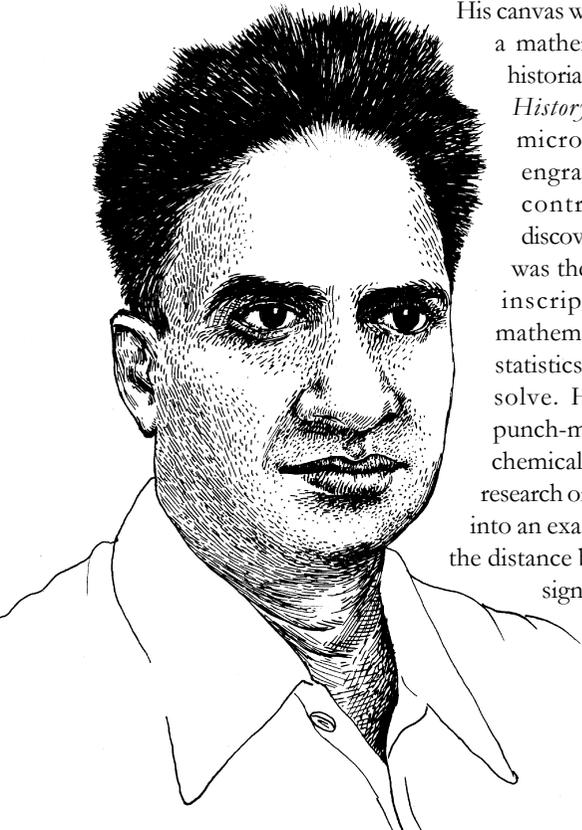


Professor D. D. Kosambi was endowed with a truly renaissance versatility. He was one of the few great Indians who had grasped the nature of twentieth century science and technology and its implications for humanity. Shunning the limelight of publicity, he made outstanding contributions to various fields of knowledge, which included Mathematics, Statistics, Numismatics, Indology, History as well as contemporary social problems. He devoted a great deal of his time to the *Peace Movement* and the campaign against nuclear weapons.

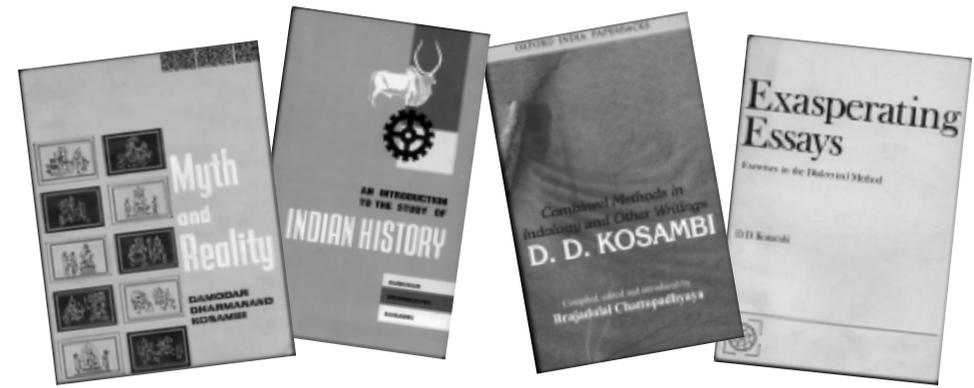


His canvas was indeed vast. Though qualified as a mathematician he showed professional historians original ways of looking at *Indian History*. With his large collection of microliths and megaliths with rock engravings he also made significant contributions to archaeology. He discovered several ancient trade routes and was the first one to decipher the Brahmi inscript at the Karle caves. As a mathematician, Kosambi taught himself statistics by selecting practical problems to solve. He weighed over 7,000 punch-marked coins precisely in a chemical balance. His painstaking research on coins raised numismatics into an exact science. His formula for finding the distance between chromosomes occupies a significant place in classical genetics.

Profound insight combined with an acute sense of detail,



INDIAN NATIONAL SCIENCE ACADEMY INSA PLATINUM JUBILEE By: Arvind Gupta Pix: Karen Haydock



complete grasp of the material under study, and creative use of the dialectical materialist method, enabled him to raise significant new questions and to offer original answers.

Within 5 years of its publication his book *An Introduction to the Study of Indian History* (1956) became mandatory reading for professors and students of Indian history all over the world. The book, together with two more that followed – *Myth and Reality* (1962) and *The Culture and Civilisation of Ancient India in Historical Outline* (1965) – have been translated into many languages of the world. His editions of the poetry of Bhartrihari and of the oldest known Sanskrit anthology - *Subhashitaratnakosha* - are acknowledged landmarks in Indian text-criticism.

Kosambi made singular contributions not just to the study of Indian History but to the evolution of its very methodology. He didn't believe that history dealt only with the dead past. He believed that history lived on in the present. And so in studying history Kosambi looked at how people lived today - what goods they used, what rituals they practised, what food they ate and the songs they sang. From that he established a continuum between the past and the present.



In the early 1990's a 13-part serial titled *INDIA INVENTED* based on Kosambi's perspective of looking at *Indian History* was made by the very well known activist and social scientist Arvind Narain Das. All these wonderful episodes can now be viewed on *Google Video*.

Damodar Dharmanand Kosambi was born on July 31, 1907. He spent his initial years in Goa speaking Konkani. His father, Acharya Dharmanand Kosambi was a renowned Buddhist scholar and taught Pali at the Fergusson College, Pune. So, Damodar had his early schooling in Pune. Acharya Dharmanand was a visiting faculty to Harvard University, where he worked on Pali Buddhist texts. In 1918, on his second visit to Harvard he

took along his oldest daughter, 19-year-old Manik and his 11-year-old son Damodar. By then Damodar was already known by his nickname *Baba*. He studied at the Cambridge Grammar School and later at the Cambridge Latin School. After four years, his father returned to India but Baba stayed behind to finish his schooling. Then he spent a year in India and tried to enrol in a college. But that proved difficult because of the different educational systems. So in 1926 Baba returned to the USA and enrolled himself at Harvard.

Damodar was a fitness freak. Regular exercises, swimming, rowing and hiking were his passions. He did brilliantly at Harvard, but during one semester along with three A's he also got one B grade. This upset his father. As a challenge, Baba did a summer course in Italian (which he had never studied before) and received an A+ which the instructor had not given anyone before. Baba promptly sent the note to his father without comment. Apart from shelves of books on many subjects and languages his room in Harvard had one photograph of Gandhiji.

He majored in mathematics and studied several European languages - Greek, Latin, French and German. He learnt Sanskrit, Brahmi and Prakrit too. The libraries in America exposed him to the wonders of all branches of knowledge from astronomy to the physical sciences, from plumbing the depths of the psyche to delving into the collective human past. Given his intellectual capacity and energy, Kosambi could have



Control over history is not to be attained by the passive suffering that has perpetuated Indian life from generation to generation. The time has now to make history seriously the out, conscious design in o

Kosambi's mapping function
Allows for interference (I), whereby one crossover prevent other crossovers in the same region:

$$I = 1 - \frac{\text{observed_number_double}}{\text{expected_number_double}}$$

The amount of interference allowed in the Kosambi m decreases as the loci get further apart, and is zero for loci:

$$x = \frac{1}{4} \ln \left(\frac{1+2\theta}{1-2\theta} \right)$$

The reason for underdevelopment is precisely that our raw materials and our great markets were exploited by the foreigner to his own advantage. Our products were taken away for the price of the cheap labour needed to take them out of the earth, and we paid the highest prices for the finished goods. In a word, the developed countries with very few exceptions are developed precisely because they made profit both ways from us; we were never paid

Freedom is the recognition of necessity; science is the cognition of necessity. The first is the classical Marxist definition of freedom, to which I have added my own...

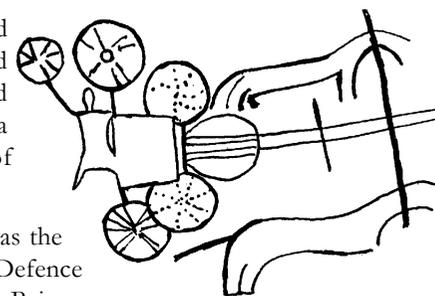
made his mark in any one of these branches of knowledge. But he chose mathematics because he *could not resist its fascination*. Mathematical results possessed clarity and were more intellectually satisfying than others.

Kosambi graduated from Harvard with high distinction (summa cum laude) in 1929. Because of the economic depression scholarships were difficult to get. So he returned to India. Thereafter he stayed close to his cultural roots in India.

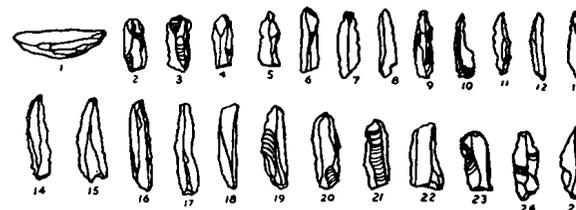
Kosambi taught mathematics all his life. He started with the Banaras Hindu University (1929-31). Here along with mathematics he also taught German which he believed to be the language of science. He also taught for a while at the Aligarh Muslim University. In 1933 he joined the faculty of the Fergusson College at Pune. Here he became known as an exacting professor, not easy to understand and not popular with those who expected to be spoon-fed, but highly admired by the bright and serious students who were willing to work hard. After 14 years he left because of serious differences with the authorities. He was not happy with the 'examination-ridden system and uninspiring standards of education'.

In 1946 he was invited by Homi Bhabha to join the newly established Tata Institute of Fundamental Research (TIFR) in Mumbai. His warm relationship with Bhabha soured within a few years, mainly due to a clash of personalities. Bhabha strayed away from research and focused on institution-building, and became a managerial scientist. There were ideological differences too – while Bhabha lobbied for *atomic* energy, Kosambi was all for *solar*.

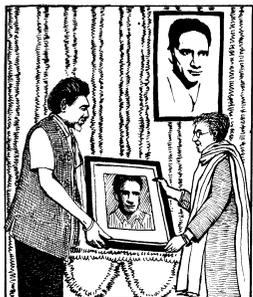
His contract at TIFR was not renewed in 1962. In 1964 he was appointed scientist emeritus by the CSIR and affiliated himself to the Maharashtra Association for the Cultivation of Science at Pune.



Major-General Enayat Habibullah was the first commandant of the National Defence Academy at Khadakwasla near Pune. Being an amateur archaeologist himself he invited Kosambi to set up the Archaeological Society in the "hobbies" section of the academy. Here Kosambi guided an enthusiastic band of instructors and cadets to hunt for microliths and megaliths,



rock carvings and other artefacts.



Prof. Meera Kosambi being presented a portrait of her father D. D. Kosambi during the Centenary Celebrations 2007

In 1931 he married Nalini Madgavkar. Their elder daughter Maya died early of cancer. The younger daughter Meera Kosambi is a well known social scientist based in Pune.

In 1949, he was a visiting professor in 'path-geometry' at Chicago and later a guest of the Institute for Advanced Study at Princeton where he had extensive discussions with Albert Einstein.

Kosambi believed in the dialectical method but was strongly critical of the orthodox left parties and called them *Official Marxists (OM)*. His criticism of *atomic energy* did not endear him to Bhabha. When Nehru wrote the *Discovery of India*, Kosambi wrote a scathing review exposing Nehru's shallow understanding of Indian History. For his fierce independence Kosambi was sidelined both by the government and the left parties. He won the first Ramanujan Memorial prize in 1934 (at the age of 26), and a special Bhabha prize in 1947. It is a reflection of the insensitivity of the Indian state that this amazing intellectual never got a state award worthy of his stature.

Kosambi's birth centenary year 2007 was celebrated in Pune with a series of lectures by leading intellectuals. The Government of India belatedly issued a postage stamp in his memory and gave a grant of Rupees One Crore to set up a Kosambi Chair in the University of Pune.



Though this remarkable genius passed away young at the early age of 58, on 29th June, 1966 he will be remembered for centuries for his brilliant contributions to diverse fields of human knowledge.



*Kosambi was an active member of the World Peace Movement. As an emissary of Peace he was very fond on the Panchsheel symbol - a bird of peace with a twig in its beak. He insisted in having this symbol printed in his book **Exasperating Essays**.*