Why has technology not helped in the diffusion of innovation into Indian society? When the topic of barriers in the cross-cultural diffusion in India is discussed the most popular targets are the class within the caste system and bureaucracy which, according to many, are hindering the rapid advance of the country.

**Caste and Class Relations:** It is India's social structure that the debate between modernity and tradition has brought into focus. It is always argued that modernity could only prevail with the eradication of caste. Such an assumption governed the outlook of the 'extremes', English modernists in the early 19th century. A more moderate expectation was that techno-economic change would inevitably lead to the withering away of caste. In no other area is the 'divided self' of the Indian intellectual so glaringly exposed. On the one hand, he responds to the concepts in Western values. On the other hand, individually, he admits to a continuing sense of loyalty to those intrinsic elements of caste, the joint family and the traditional marriage. The two issues here are the scope of social reforms and the nature of identity. None of India’s modernists has attempted to tackle caste head on. Reform has concentrated on its most distasteful feature - untouchability. The Union Government has simply outlawed the practice of untouchability, no doubt realizing the glaring gap between the law and its implementation.

Any amount of exhortation for Harijan uplift, legal measures and preferential treatment for them in education and job opportunities does not have any impact on the caste Hindus. This will be amply evident if any one visits a village.
Even among the Harijans, throughout the country there are varying degrees of acceptance of their status in life and this stoicism fostered by the theory of 'Karma' makes it difficult to organise a mass revolt. On the other hand, the governmental measures to improve their political and economic privileges have only accentuated the cleavage and strengthened the caste barriers. This is indeed a barrier despite the fact that science and technology have brought about endless social contacts of Harijans with caste Hindus for innovations to take uniformly deep roots and to bring about desired social changes.

The real problem today is, however, not one of caste but of class relations in the country. These class relations have evolved both within a caste and also cut across all caste barriers in society. Caste therefore plays a less significant role in national affairs. Historically the fact that Brahmins and Kshatriyas co-existed without conflict of interest might indicate that their roles in society had been well defined, and that each, for the sake of self-preservation, protected the other. A similar phenomenon is noticeable in modern Indian society when Brahmins and non-Brahmins join together for a common cause, say, to protest against the government policy of job reservations for Scheduled and Backward classes.

A spin off from the Western contact has been the creation of trade unions and professional interest groups. These groups with common goals have become more closely knit classes. These classes have tended to be the leaders of society. There is also the struggle between the have and have-nots within each class or group. The fact that society has denied one group of people certain benefits which other groups enjoy creates its own class tensions irrespective of the caste to which an individual belongs.
Critics of Indian democracy have asserted that, because society was dominated by caste, caste Indians were eminently fitted for an aristocratic form of government. It is also said that India needs "the hierarchical leadership of caste and that internal order could best be maintained by a patrician aristocracy who were traditionally accustomed to control and lead lower classes". Such theories have been proved out of date and science has proved that man is the product of his environment, and the governments, both the Union and State, which are themselves part of this system, must seriously come to grips with the problems of class relationships and initiate a time-bound social action.

**Bureaucracy:** Macaulay indeed succeeded in creating and leaving behind in India a civil service full of men, brown in complexion, but Western in orientation and outlook. The civil service once designed for revenue collectors has not been able to adapt itself to the country's rapid developmental needs. Other than the honoured place which the Appleby report and the Report of the Administrative Reforms Commissions occupy on the shelves of the Secretariats, not a single worthwhile change has occurred in the working of bureaucracy. This indeed is a serious indictment of a service which must show evidence of capacity to break the old steel framework for ushering in rapid socio-economic change. Like law's delays, the civil service got built into it a series of checks and counterchecks by alien rulers to ensure that their revenue collection was untampered with. According to a senior Indian civil servant, between the time a project proposal is received and an official order is issued it takes anything up to six months.

1. JACKSON, AMT - The Hindu Theory of Government in The Empire Review.
During the British regime, the civil service was constituted to promote status quoism. The service developed an attitude of looking for precedents for any action and the pattern survives to this day. Anything new is deferred or delayed so that time itself solves the problem. One cannot deny the Indian civil servant his due for his hard work, plodding integrity, neutrality on policy matters and conventional party politics. But the inertia ridden civil services are also alleged to resemble white elephants, their performance being 'slowly, in constant direction, and only on files'.

After all in British India the Indian civil servant was educated - the pattern still continues - in the administrative virtues for largely wrong reasons: to reduce cost without carefully assessing benefit; to make the trains run on time rather than to select the right places for new railways; to replicate in India systems of government, and of education, formerly suitable in Britain.

To generalise any situation in India is a risk because the people in IAS in recent times have shown a remarkable degree of adaptability whether in community development work in varied administrative situations in the country or the diverse permutations of the formula of 'democratic decentralisation', tried out in different states.

Though these are exogenous factors worthy of record, the impact of Britain on India especially on the civil service could not be predicted. If today top bureaucrats read British newspapers and listen to the BBC and have their thought processes influenced by these media, if they want to send their children to the best English medium schools and later to British universities, it simply indicates their desire to maintain links with Britain.
Parliamentary Democracy: A.L. Basham thought that K.P. Jayaswal, a barrister and a competent Sanskritist, had used logic to prove that ancient India had republics and constitutional monarchies with popular assemblies and cabinet government and that democracy was not unfamiliar to their remoter ancestors. The implications in this observation are that Jayaswal was arguing like a clever lawyer to convince Indians of what was nonexistent. However, even to this day Khasis, a tribal people in Assam, elect their leader by a unanimous vote and they had no notion of parliamentary democracy as it is understood in the West. Even after the advent of the British, the princely states in India followed, with varying degrees of benevolence, the ruling of their petty kingdoms; firm benevolent despotism, to benevolent paternalism. It is only independent India that adopted the Westminster model of parliamentary democracy. This exogenous system was imposed on a country which, despite her different forms of cultural, administrative and political differences, had been unified under the British, who were in fact remote from the people they ruled.

Though a nominally democratic form of government was introduced in 1947, political parties in India, unlike those in Western democracies, are formed not on the basis of political differences, policy and ideologies but on the basis of caste. It must, however, be conceded that prior to independence there was a semblance of political ideologies, but it is evident that after 30 years, class structure more than caste still continues to play a dominant part in Indian politics.

Parliamentary democracy in the West was able to achieve a degree of political stability and economic equality because of the absence of a caste system. Even in the Greek states, places where democratic principles were
conceived, there were upheavals against this system of
government. Rethinking on "The role of democracy in
India and Britain" was attempted at a Delhi seminar in
January 1976. However, this exogenous factor in the Indian
scene has been grossly misused to strengthen vote banks
in rural areas and manipulate successfully this number
game of politics. Frequent resort to direct action and
extra legal methods by various parties and groups, slowness
in the development of ideas of orderliness, legality
and evolutionary progress, tardiness in the rate of
economic growth throughout the process of democratic
planning, prevalence of widespread unemployment and poverty
tempt one to ask whether the country was fit for parlia-
mentary democracy. These are barriers to transplanting a
system into a country without a proper knowledge of the
other social imperatives which could absorb and assimilate
the process. Now that the system has worked, however
imperfectly, for 30 years, it has taken roots, but it
needs to be Indianised in the context of its functioning.

Science and Technology: Elsewhere it has been pointed
out that the benefits of science and technology to India
under alien rule were aimed to serve the interests of the
Raj. The scientific and technological components in edu-
cation were limited to producing technicians to maintain
equipment. It was not education which drew out the
best in each student and fostered innovation and creativity.
Since independence, technological and communication revo-
lutions have changed the relationship between peoples and
nations. The Indian, therefore, started with a handicap
in having to accept what Western technologies had to
offer, because over centuries his creative powers had
been atrophied. He had to leapfrog to catch up with deve-
lopments elsewhere. The external factors have not been
actively helpful despite the fact that India since inde-
pendence has attained the position of having the third
largest scientific manpower, and is the tenth industrial power in the world. There is criticism that India is trying to arrive at post-industrial culture from the pre-industrial without passing through an industrial revolution. This observation by Western critics, if taken seriously, would retard the rate of progress that India wants to make. A monograph on Foreign Technology in India, published by the Economic and Scientific Research Foundation, New Delhi, lays bare various strategies by vested interests in blocking development - multinational corporations, trade practices and royalty repatriation. Foreign governments would like to seek guarantees from India for nuclear tests etc., and disregard contractual obligations to supply nuclear fuel. Affluent countries are willing to hire the best of Indian brains to subserve their strategic interests through the medium of scholarships and fellowships. A nuclear testing device implanted in the Himalayas by the CIA in 1965 to provide a check on Chinese nuclear activity, which came to light in 1978 is indicative of the level of technology that Western powers have achieved but which they would not like us to reach. The country has to make clear headway because people are impatient with the progress made. Though science and technology in the last 30 years have transformed agro-feudalistic Indian society into a modern and modernising society, the Western attitude, which could be helpful in accelerating this process, has been uncooperative. After all when one talks of rapid industrialisation and social change one should not keep one's own lifetime as the frame. We may not be able to see the results; but to the extent that we can project our thought, it is necessary to develop indigenous technology and self-reliance to such an extent that Indians can disregard the barrier without offending any power and still aim at being a strong and respected nation.
Barriers in Agricultural Innovation: Indian agriculture, which depends largely on the vagaries of monsoons, has been rejuvenated, in all its manifestations, through the efforts of foreign collaborators. But foreign assistance of any kind can only be entrepreneurial in nature and cannot be a permanent feature. Some of the British volunteers who worked for two years in the Rural Extension Centres in Tamil Nadu - university graduates in dairy farming, veterinary science, poultry, agriculture and community development - were faced with the problems of superstition, when a sick cow had to be cured. The Indian agricultural graduates who were their counterparts would watch the foreigners do their work, but would not enter a cow shed or give a helping hand in the cleaning process or touch cowdung because of caste considerations.

After spending some years in an agricultural university, graduates who are entirely theory-oriented refuse to return to the villages to undertake field work. They fail to inspire confidence in rural folk. The lure of city life is so great that they refuse even to return to their villages or parents, and look for jobs in offices. The dichotomy between the precept and practice is glaring in the behaviour of agricultural graduates. Besides, the present disparity in ownership of land is in itself a barrier to diffusion, because innovations in science and technology for better production in agriculture - in the form of inputs - are not within the reach of the landless labourer, whereas the wealth of the landlord is in itself a security for the state to offer him all facilities. This in turn enhances the growth potential of a rich landlord whereas the landless labourer is hindered by his lack of even the minimum capital. The disparity widens between the two, as is evident by the results of the Green Revolution.
The present employment structure in the country has encouraged governments to employ the Village Level Worker who, for want of a job, accepts the challenging role of a communicator of agricultural innovation without any motivation. This is probably the most serious barrier to the diffusion of up-to-date innovation.

**Anti-English Attitudes and Education**

English, which is no longer the language of England alone is accepted as one of the statutory languages in the country. One has to concede that 70 per cent of world literature is in English and without this medium, which administratively unified the country, Indians could hardly hope to have access to widening horizons of knowledge. Without knowledge of English, Indians from different regions could hardly speak to each other in this vast country. As the lingua-franca English is the only language which Indians used to communicate with any one outside India. But within the country English has been politicised to such an extent by the Hindi protagonists that it threatens to disintegrate the country. To communicate with the masses, however, the regional language is better suited and regional language in administration upto a level can hasten the developmental process if bi-linguism - regional language and English can be accepted as a national policy. As it is, English is made out by the homespun Hindi protagonist to be a great barrier between the elite and the masses. How to de-politicise this language issue is in itself a problem for research.

Despite the political arguments/the use of English, it remains the language of the country's elite. The need for scientific and technological communication ensures its importance in India. Though only five per cent of the population speak English, it is this educated elite that
runs the government, heads most of the large business houses and reads the daily newspapers, one in four of which is in English. While English does still help language-groups to communicate, problems have emerged in its role in education. Given the importance of English in commerce and industry, the usefulness of graduates will be impaired by declining linguistic standards. Against this educational dilemma, even good graduates with linguistic disability are not getting Commonwealth Fellowships, scholarships and similar awards. Further the spoken English of many Indian doctors who seek employment is so weak as to create a barrier between the doctor and the patient.

Within the country, much work needs to be done. If the Hindi group is convinced that English will not be a rival and that there will be a need for English even after Hindi and the other regional languages come into their own, for our contacts within the country and with outside world, then probably this artificial barrier and/or deep distrust of the power of English will disappear. Hindi protagonists now fear that the English language is like a banyan tree under which nothing else grows. Only the logic of events and time will de-politicise the English language in India.

The country's attitude to education in general and the role of English in higher education in particular constitute an important facet of national development especially in science and technology. Speaking at the 25th Pugwash Conference, on 'Development, Resources and World Security', held at Madras in January 1976, Dr O Hoffmann, a representative of Austria, said in his paper on 'Problems of the transfer of scientific knowledge to developing countries', that if industrial development should proceed in comparative independence from outside management, it requires the presence of local scientific experts capable of assisting
the managers and engineers of factories and summarised "that in order to improve the standard of scientific research in less developed countries and to prevent the brain drain" from them, the following measures should be taken:

"i. Most of the money that so far has been given for scholarships to students from lesser developed countries for postgraduate training in science in developed countries should be redeployed in sending their senior and junior scientists from developed countries to the universities in the lesser developed countries in order to help with the organisation of postgraduate and research training there. The teachers should go to the pupils rather than the pupils to the teachers.

ii. In those lesser developed countries where only lower university courses are offered presently, everything should be done to organise postgraduate courses leading to PhD degrees. For this purpose, the help of sponsoring institutions in the developed countries should be sought. In order to make the degrees equivalent to similar degrees in developed countries, the institution of external examiners should be introduced."²

Regionalism

When the British had to partition the country in 1947 into India and Pakistan they did not realise the chain reaction that the division would set up. Linguism began to raise its ugly head and the country had to be carved up into linguistic states – beginning with Andhra in 1956. There has been a North and South - Hindi and non-Hindi - Aryan and Dravidian dialogue, with the English language

². HOFFMAN, O - Problems of the Transfer of Scientific Knowledge to Developing Countries in The 25th Pugwash Conference on Development, Resources and World Security.
acting as a buffer in this polarisation exercise. Even in the linguistic states like Andhra Pradesh and Maharashtra, there is a demand for further dissection into Andhra and Telengana in AP, and Maharashtra and Vidharba in the West. These fissiparous tendencies have expressed themselves in the guise of provincialism and regional autonomy.

If there is one significant and unique contribution of the Raj to the history of India, it is the fact that India had been brought together as one administrative entity and that this had created a growing consciousness of nationalism. This helped considerably in economic planning because the country could be treated as a single economic unit. Planning requires a great deal of central control and direction. There is need to coordinate a master plan. Linguistic states demanding more and more state autonomy, with their own regional plans, create an imbalance in the overall planning picture.

At this point the American experience may not be out of place. How could a country in less than 60 years develop from a largely agrarian economy into the world's most developed industrial centre without central direction, control and planning? It is good to remember that during all this time the 49 states have maintained their individuality, have stuck to their fundamental rights and yet in the larger context, where popular economic and national interests are involved, they have always cooperated with the federal government. This is because the American first developed a strong national consciousness and sentiment.

Whereas one can argue that Tamil Nadu or Karnataka or Bihar must push its claims for development on the Centre, there must be evidence of national consciousness before there can be any strong provincial feeling and outlook. This demands enlightened statesmanship on the part of leaders both in the states and at the Centre. It is a prerequisite in the absence of which there can be no cohesive forces to keep the country together.