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Third Concept
LB - 39, Prakash Deep Building,
7, Tolstoy Marg, New Delhi-110 001.
Phones : 23711092, 23712249
Fax No: 23711092.
E-mail : third.concept@rediffmail.com
Website: www.thirdconceptjournal.co.in

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BJP's Predicament

Whether at the helm of affairs or in the opposition, the BJP is often found at the horns of dilemma when it comes to delivering the promises. Populist slogans aided by the social media campaigns, bizarre rhetoric and media blitzkrieg indulged in by the BJP proved instrumental in hoodwinking the gullible masses to translate their disenchantment with the UPA into so-called electoral victory. Instead of delivering on what it had promised within a time frame, the party leadership has continued to gloat over its unprecedented success and so far has seldom bothered to address serious issues. Finding its own promises cumbersome to deliver, it has found an easy way to implement the unfinished agenda of the outgoing UPA and reworking on projects of the previous regime. In other words, the party has taken a U-Turn.

The new dispensation has officially gone back on its 2014 Lok Sabha election manifesto promise of providing farmers 50 per cent profit over input costs as suggested by the MS Swaminathan report. Its logic that the benefit to farmers would alter market prices is unacceptable because the additional cash called "profit" can be passed on separately through direct cash transfers or by cheque without affecting the market price. Agriculture after all survives on subsidies everywhere. The new government seems to be apathetic towards the distress of farmers, suicides by farmers in debt or welfare of the 65 per cent population dependent on agriculture. However, its emphasis seemingly seems to be on cutting its own subsidies and expenditure. The previous UPA government messed up its finances by building huge grain stocks in preparation for implementing the food security law. Factors like State taxes, corruption at FCI and PDS levels, manual handling of grains, pilferage and waste due to insufficient storage and processing capacities contribute to increase in the cost of farm produce for the government and the consumer. The poor farmer remains at the receiving end and suffers ultimately.

The BJP government at the Centre has shown urgency to pass the Bill to replace the ordinance on land acquisition in the just-started Parliament's Budget session. The aggressive tone of the BJP has been mellowed down in view of the fact that it lacks majority in the Rajya Sabha and accordingly it has begun with a conciliatory note on this issue. The BJP's top brass, including the Prime Minister, are talking of working together with the Opposition and Prime Minister Modi even attended a family function of Mulayam Singh Yadav and Lalu Prasad recently. For the first time, the BJP has reached out to Congress president Sonia Gandhi.

However, the Opposition is unlikely to tone down its stance on the land acquisition bill, especially on the issue of changes being made. The Congress and other opposition parties are expected to maintain their hardened stand on this issue. If the Bill is not passed before early April this year then the ordinance would automatically lapse. Under the prevailing circumstances, the BJP is faced with the proverbial Hamletian dilemma of to be or not to be. Predicament for the BJP is: whether to get all the six Bills passed through a joint session of both Houses of Parliament in keeping with its image of providing a strong government, or buckle under Opposition pressure and appear weak before its supporters in industry. Its past role as a disruptive Opposition may enfeeble the BJP's efforts for garnering cooperation from other parties. After a U-turn on the Swaminathan report the party annoying farmers would further hurt itself politically. Its allies like Akali Dal and Shiv Sena have already echoed their opposition to the new changes made in the land acquisition bill.

No party would like to be seen supporting a Bill that hits its rural vote bank. The pressure is also being built up by the Bharatiya Kisan Sangh and social activist Anna Hazare. In view of the high political cost involved, the BJP may have no option but to revisit the clauses concerning social impact assessment and consent. And by doing so, it may send a wrong signal to industry. In the wake of ensuing assembly elections in Bihar in the backdrop of having faced drubbing in Delhi, it may not like to alienate vast chunk of rural vote bank just to please the industry.

— BK

What ails India's Global Educational Ranking?

Anil Singh*

[India has one of the largest higher education systems in the world. Over the past few years, India's higher education sector has witnessed tremendous growth. The sector boasts of 44 central universities, 298 state universities, 148 state private universities, 130 deemed universities, 82 MHRD funded technical institutions including IITs, IIMs, IISERs, etc. While India has shown impressive growth in the number of institutes and enrolment in the country, it still faces challenges on several fronts including low and inequitable access to higher education, shortage of faculty, deficient infrastructure as well as low-quality and inadequate research.]

It seems that entire Indian Higher education system is going through a crisis of identity. While delivering convocation addresses of various universities and educational institutions, President Pranab Mukherjee also expressed deep concern over the poor quality of higher education, and said that institutes in the country have failed to claim international repute like those enjoyed by Oxford, Harvard or Stanford universities and attributed this to the poor quality of education, vacant teaching posts and lack of competitiveness among centres of excellence.

The three most widely observed university rankings – Quacquarelli Symonds (QS) World University Rankings, Times Higher Education World University Rankings powered by Thomson Reuters and the Academic Ranking of World Universities commonly known as Shanghai Ranking – have published their result of 2014 and none of the Indian educational institution could get the place in top 200. Naturally a pertinent question appears why our national elite institutions are not within the top rankings, whereas many universities from other Asian countries have got better ranks than us.

Considering that India is one of the global emerging and knowledge dependent economies, it is a serious concern in terms of quality of advance education that is being offered by our universities. To get the place in global ranking, there are many issues which need immediate attention by our educational

planners and policy makers to revamp our education system before it is too late. Some of them are discussed in this paper.

Teaching an unattractive profession

The educational system of India has not been able to attract meritorious students in teaching and research. For the past fifteen to twenty years, interest in teaching profession has been declining and it has not been opted as a first choice as career by the students. Due to attractive pay and perks, our best talent is attracted towards MNCs and other private sector jobs and second choice is government civil services.

Then remaining students want to join teaching profession. If we conduct survey at the level of Assistant Professor, we will find that mostly joined this profession by chance and not by choice. To make this profession more attractive, we have to start Indian Education Service (IES) at par with other central services like IAS, IFS, and IPS for which selection should be done by Union Public Service Commission (UPSC). In many states of India there is State Education Service to select Assistant Professor through their respective Public Service Commissions.

Shortage of Qualified Teachers

The strength of an institution is its human resource. It has been amply realized that the way faculty is recruited leaves much to be desired. The moment any faculty position is advertised, a sort of rat race and lobbying starts. All of us are aware of these

* Library & Documentation Division, NCERT, New Delhi.
(dr.anilsingh5@gmail.com)

facts and need to be candid about accepting them. Recruitment of poor faculty has a cascade effect on the overall health of the institutions as well as on the human resource they generate by way of education and research.

It has been seen that non-meritorious, mediocre and predetermined candidates are entering in teaching profession through unfair means. In most of the cases, subject experts do not give their frank opinion on the performance and domain knowledge of the candidate. They merely attend the interview to fulfill the quorum. Chairpersons dominate the whole interview board. Fresh appointments at the level of Assistant Professor are not done on a transparent basis especially in autonomous bodies.

Due to lack of standard guidelines for screening, stronger candidates are screened out deliberately to make way for pre-determined candidates. For example, at the entry level for Assistant Professor the essential qualification is Post graduation with UGC-NET. When number of candidates for the post is very large, screening is carried out keeping in mind the qualification of favourite candidate. There are no standard criteria fixed by the UGC regarding number of candidates to be called against one post.

There are many universities in India which have been running various regular and professional courses for so many years without appointing any regular faculty. These courses are being taught by contractual teachers on *ad-hoc* or per period basis. Now we can imagine as to what type of teaching standard these universities have and how can these universities compete at global level?

A new practice started in this profession is to declare the interview result as “NFS” which means “None Found Suitable”. Such types of cases have been seen in many interviews where there is no favourable candidate of the Chairperson of the interview board. There are no defined criteria of suitability. It is just a matter of interpretation.

Lack of Regular Curriculum up-gradation

While addressing the first-ever conference of Directors of National Institutes of Technology (NIT) on November 07, 2013, President Pranab

Mukherjee said at least one or two departments in every NIT must be turned into centres of excellence. He called for a revision and up-gradation of curricula, examination reforms and promotion of a culture of excellence and stressed that programmes must be periodically evaluated, based on industry trends and emphasis should be on research and innovation.

But in our country, mostly state universities do not care to revise the curriculum periodically. The pace at which knowledge and information is multiplying warrants the regular update of syllabi. People from diverse fields like administrators, managers, engineers, doctors, librarians, scientists, accountants, lawyers and artists having practical knowledge should be encouraged to work for universities so that regular up-gradation of syllabus can be executed as per the demand of industry.

Contractual Appointments in Teaching

In the “UGC regulations for higher education 2010”, it is clearly mentioned that the teachers should be appointed on contract basis only when it is absolutely necessary and in case student-teacher ratio does not satisfy the laid down norms. The fixed emoluments paid to such contract teachers should not be less than the monthly gross salary of a regularly appointed Assistant Professor. Such appointments should not be made initially for more than one academic session.

However, for the last few years, a trend has been started in teaching profession to appoint contractual staff on fixed salary between Rs.5000-20000 and job depends upon the mercy of Head of the Department. There are thousands of contractual teachers who are working in different universities since last so many years with the hope of getting regular appointments. If a teacher does not get job surety, how he/she can be expected to teach the students with full intellectual potential and calibre.

Appointment of contractual teaching staff is also a new breed of corruption in this profession. The obvious motive is to unfairly place the contract appointees for regular selections and it is obvious that vested interests are involved. If the government

has decided to follow the contractual appointment system, the terms and conditions must be clear. We have enough talent in our country; it is primarily the question of providing them an encouraging and respectful academic system.

Teaching without research

Faculty members, whether in schools, colleges, or universities, must be capable and talented and they must also be interested in teaching and research both. If we look at Indian universities, the mandate of most universities is to just teaching without research. As a result, their output in terms of research is small. Recently, government has set up a committee to create a framework for evaluation of research and rankings by promoting healthy competition among institutions, departments and individual researchers.

The move follows a disappointing performance by India's higher educational institutions in world rankings this year. The 18-member committee to improve research performance of academic institutions will be chaired by K. Vijay Raghavan, Secretary, Department of Biotechnology, and will submit a report within three months. But it is a big question, whether there will be any fruitful result of this committee like many other committees in higher education.

Time consuming recruitment process

It is common among higher educational institutions, whether it may be central or state universities, or any centrally funded other autonomous bodies, to remain headless for a long time after the incumbent demits office. Therefore, it is needed to have collegiums of scholars to select the head for these institutions. In the absence of regular head of the institutions many important decision could not be taken by the officiating head. There should also be a time-bound recruitment process of three to six months for all teaching posts. It has been noted that if personal interests are involved then the recruitment process is completed within a month; otherwise, it takes more than a year and in some cases it has also been seen that institutions advertise the posts again and again till their favourite person is selected.

In India, there is no agency to audit as to how many times the institution has advertised the post, how much amount has been spent on these advertisements, whether the post is filled up or not. On the name of autonomy, the heads of these institutions are wasting valuable tax-payers money. It has also been seen that when any teacher retires, there is no seriousness to fill the vacancy at the earliest. If appointment on many prominent posts (like CJI, CVC, CIC, CEC, Cabinet Secretary etc.) can be done well in advance before the person retires, then why not for faculty.

Selection of Non-academic Head of the Institutions

It has also been observed that there is lack of efficient leadership in nurturing our universities. If there is a mediocre person at the highest position in the university, then the system would be polluted. Vice-Chancellor from IAS, IPS and defence background cannot make good academics. When such persons are appointed in the universities, the whole system collapses. These institutions only cater to admission, examination, revaluation, re-examination, and distribution of degrees. They do not care much about teaching and research.

In recent years, it has been observed that persons from non-academic background are selected on the basis of 'political consideration' as Vice-chancellor and Directors by violating the norms and qualification as prescribed by UGC. Such types of person are appointed to implement political agenda of respective political party in education.

Recently teachers of Jamia Millia Islamia (JMI) wrote to the President Pranab Mukherjee, who is also the visitor of the university, requesting him to appoint "an academician of high repute and integrity" as the next vice-chancellor of the university in conformity with the qualifications for the appointment of V-Cs as prescribed by the University Grants Commission (UGC).

Quality of Doctoral Research (PhD)

Poor research output is considered as one of the biggest drawbacks of Indian higher education system. There are many causes for deteriorating

quality of the PhDs in India. In 2002 more than 1500 PhD theses were submitted within four months in various universities in India due to exemption in NET for Lectureship for those who submit their theses on or before 31st December 2002. Again in 2009, UGC extend this rule and exemption has been given for PhD holder from UGC-NET exam.

After 2009, there is boom in number of PhDs awarded by Indian universities (see Table 1). On one side, UGC has made strict rules in government universities for doing PhD where coursework and entrance test is necessary, whereas on the other side, it has opened the door for undeserving and mediocre persons for doing PhDs from private universities.

In India, PhD has become easiest degree to earn from most of the private universities. In these universities, there are no screening tests and interviews, no coursework, and no rigorous assessment of research work, just a Master's degree in hand and a pre-determined waiting period will

lead you to a doctorate. It's now an open secret that anyone can virtually buy a PhD degree. You just need to pay two/three lakh rupees to the right person.

In some universities, registration, coursework, thesis and *viva-voice* are all effectively managed. There are many universities which do not have adequate infrastructure and faculty for even postgraduate-level teaching, but have been offering PhDs. Most of these universities target students who fail to get a place in premier institutions.

Recently, we have seen the case of one of the private university of Meghalaya. In one year, it has awarded more than 400 PhDs. If we investigate the number and quality of PhDs awarded by private institutions, we will find many irregularities. Our educational planners are happy to see the quantitative growth in number of PhDs awarded by the Indian universities between 2008-09 and 2011-12. But, the real question is that has anybody tried to check the quality of these theses?

Table 1: Faculty-wise Number of Doctorate Degrees (Ph.D.) Awarded from in 2007-2011

S.No	Faculty	2007-08	2008-09	2009-10	2010-11
1	Arts	4405	3496	4862	5037
2	Science	4514	3603	4619	5232
3	Commerce /Management	873	724	980	1259
4	Education	425	403	588	645
5	Engineering/Technology	1427	1141	1449	1682
6	Medicine	277	298	386	601
7	Agriculture	664	427	652	586
8	Veterinary Science	123	93	162	165
9	Law	127	152	146	220
10	Others	402	444	633	666
	Total	13237	10781	14477	16093

Arts: includes Humanities, Social Sciences, and Languages etc. Science : includes Home-Science, Computer Science and Computer Application. Education: includes Vidya Varidhi,

VachaspatiMedicine: includes Ayurveda, Dentistry, Homeopathy, Nursing, Pharmacy, Public Health/ Social Preventive Medicine, Unani, Tibbia, Physiotherapy, Occupational Therapy and Siddha

Medicine etc. Others: includes Library and Information Science, Music, Performing/Visual Arts, Journalism & Mass Communication, Physical Education and Social Work etc.

Source: UGC Annual Report of 2008-09; 2009-10; 2011-12

Quality of Research Papers and Articles

After the implementation of API/PBAS by UGC for evaluation of performance of faculty for career advancement and recruitment, a trend has emerged in the last five years to start an in-house journal within the organization, or by individual association and non-government organisation. In 2007, there were 5147 journals registered in India as per ISSN register whereas this number reached 13851 in 2012 (see Table 2). In many Indian universities, for the selection of faculty the research journals are classified into national and international for allotting

the marks. While quantifying these values by non-technical persons, many times a journal having word “International” is treated as foreign publication and it gets more marks. An influential person can get his or her paper published easily, whether it has any novelty or not. People with little experience in a particular field become expert referees. Plagiarism is rising day by day in education system. We have seen many prominent persons in the field of education who have been caught in this act. The ‘copy/cut and paste’ tendencies have increased the plagiarism activity. And there are several ‘cottage – industry journals’ which publish anything that is in type form, but who is to blame. Therefore, we should have a strict code of conduct for editors and referees. Therefore, while evaluating the quality of publications, emphasis should be given to those publications which are indexed and cited by international databases like SCOPUS, Web of Knowledge etc.

Table 2: Number of Journals Registered as per ISSN Record (from 2007 to 2012)

Year	2007	2008	2009	2010	2011	2012
No. of Journals Registered	5145	6400	7425	9119	11425	13851

Source: ISSN Registrar (www.issn.org)

Disparity in Budget Allocation

The UGC has been providing grants to Central and Deemed Universities, both under Plan (Development) and Non-plan (Maintenance) schemes while assistance to State Universities is being made available only under Plan (Development) Schemes. Under General Plan Development Assistance, the UGC assists each eligible University for the overall development covering the aspects namely, enhancing access, ensuring equity, imparting relevant education, improving quality and excellence, making their University administration more effective, providing more Faculty Improvement Programmes,

enhancing facilities for students, augmenting research facilities and any other plans of the University.

In order to fulfil these objectives, the financial assistance to meet the requirements of the University in terms of infrastructure, staff, equipment, books & journals, library etc. can be provided by the UGC under the General Plan Development Grant. But, it has been seen that there is much disparity in allocation of budget to different universities which is also one of important reason of degradation of the universities.

Table 3 & 4 shows the five highest and five least allocated budget to different universities under plan and non-plan allocation in the year 2011-12 by UGC.

Table 3: Plan grants paid to Central Universities in 2011-12**OLD CENTRAL UNIVERSITIES**

Highest allocated budget Universities	Rs. in Crore	Least allocated budget Universities	Rs. In Crore
Indira Gandhi National Tribal University	95.02	Maulana Azad National Urdu University	5.20
University of Hyderabad	80.33	The English & Foreign Languages University	24.00
University of Delhi	75.87	University of Allahabad	25.25
Jamia Millia Islamia	63.94	Aligarh Muslim University	34.20
Pondicherry University	63.84	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	37.15

CENTRAL UNIVERSITIES IN NORTH-EASTERN REGION (NER)

Tezpur University	63.00	Rajiv Gandhi University	13.75
Mizoram University	42.13	Sikkim University	20.00
North-Eastern Hill University	39.60	Tripura University	22.25
Manipur University	34.97	Nagaland University	26.25
Assam University	32.95		

NEW CENTRAL UNIVERSITIES

Central University of Rajasthan	107.00	Central University of Himachal Pradesh	10.00
Central University of Karnataka	100.00	Central University of Jammu	11.50
Central University of Tamil Nadu	98.00	Central University of Kerala & Punjab	25.00 (each)
HNB Garhwal University, Uttrakhand	91.80	Central University of Gujarat	30.00
Dr HS Gaur University, MP	69.47	Central University of Orissa	35.00

Source: UGC Annual Report 2011-2012, pp.82-83.

Table 4 Non-Plan grants paid to Central Universities in 2011-12

Highest Least allocated budget Universities	Rs. in Crore	Least allocated budget Universities	Rs. In Crore
Banaras Hindu University (including Institute of Medical Sciences)	559.17	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	8.83
Aligarh Muslim University (including J.N. Medical College)	545.22	Babasaheb Bhimrao Ambedkar University	13.15

University of Delhi (including University College of Medical Science)	390.83	MaulanaAzad National Urdu University	20.13
Jawaharlal Nehru University	201.14	Rajiv Gandhi University	21.78
Jamia Millia Islamia	165.62	Tripura University	22.50

Source: UGC Annual Report 2011-2012, pp.86-87.

Too Many Regulatory Bodies

Presently, most of the educational regulators like AICTE, NCTE, DEC, MCI etc. (see Table 5) are entrusted to regulate the institutions of higher education and also to overlook the other norms. These regulators were envisioned to play a role of a catalyst regulatory body catering to the burgeoning manpower needs of the Indian economy. Instead of fulfilling these roles, these regulators have become 'Kamdhenu' cow for the nexus of corrupt politicians, bureaucrats, academicians and businessmen helping each other in making quick money through setting up more and more institutions. All norms for infrastructure, faculty, and curriculum have been flouted. These regulators have given licenses to set up thousands of institutions

without any reference to the actual manpower needs of various professions.

In recent years, we have seen that number of senior authorities of these regulatory bodies have been arrested due to involvement in corruption. One of the core questions is that "Whether the colleges affiliated to University are obliged to take separate permission/approval from these regulators to run a course.

Professor Yashpal Committee (2009) had suggested the integration of various statutory bodies related to education into one agency i.e., "The National Commission for Higher Education and Research (NCHER)". Constitution of one apex body can facilitate better governing of the institutions of higher education. However, no concrete step has been taken to implement this recommendation of the report.

Table 5: Major Regulatory bodies in India

S.No	Regulator	Year of Estb.	Area
1	Indian Nursing Council (INC)	1947	Nursing Education
2	Dental Council of India (DCI)	1948	Dental Education
3	Pharmacy Council of India (PCI)	1948	Pharmacy Education
4	Medical Council of India (MCI)	1956	Medical Education
5	The Bar Council of India (BCI)	1961	Law Education & Practice
6	Central Council for Indian Medicine (CCIM)	1970	Education in Indian Systems of Medicine
7	The Council of Architecture (COA)	1972	Architectural education and registration
8	Central Council of Homeopathy (CCH)	1973	Homeopathic Medicine
9	Veterinary Council of India (VCI)	1984	Veterinary Education
10	Distance Education Council (DEC)	1985	Open and Distance Education
11	All India Council of Technical Education (AICTE)	1987	Technical Education

12	The Rehabilitation Council of India (RCI)	1992	Rehabilitation and Special Education
13	National Council for Teacher Education (NCTE)	1993	Teacher Education

Source: <http://www.ugc.ac.in/page/Professional-Councils.aspx>

Proliferation of Open & Distance Learning (ODL) Institutions

Higher education sector has grown significantly in scale and size but it is still unable to meet the growing demands because of many reasons including resource constraints. It is not possible to meet this rising demand through the capital-intensive conventional system of education only. The need for an alternative strategy to supplement the conventional system of higher education has been appreciated and accepted long back by the policy makers of the country.

Through various policy and programme interventions, attempts have been made to promote Open and Distance Learning (ODL) system to facilitate the expansion of higher education sector for the fulfillment of aspirations of those who are deprived of pursuing it for whatever reason.

In the initial phase of Distance Learning, no regulatory framework outside the University system was envisaged. The institutional arrangements and delivery mechanism for the programmes were devised and developed internally by the universities on its own through respective Statutory Bodies like Academic Council and Executive Council. Later on, when the number of institutions offering correspondence courses started increasing, the University Grants Commission in 1978-79, with a view to maintaining high standards, prescribed certain guidelines for starting correspondence courses.

In 1985, the UGC in exercise of the powers conferred by clause (f) of sub-section (1) of section 26 of the University Grants Commission Act, 1956 came out with the detailed regulations for maintenance of standards of instructions for the grant of the first degree through Non-Formal/Distance Education system. These Regulations applied to all first degrees in the faculties of Arts, Humanities, Fine Arts, Music, Social Sciences, Commerce and Sciences. The UGC also notified rules in 1988 to determine the fitness for grants to Open Universities imparting education exclusively through distance education in any branch or branches of knowledge.

In order to keep pace with the growing demand for recognition of ODL programmes, the DEC in the year 2007, decided to accord institutional recognition instead of programme specific recognition on the assumption that the appropriate academic bodies of universities/institutions would take care of the quality of education imparted. On the basis of approval of DEC, many universities / institutions started technical education programmes without the approval of the concerned regulator like AICTE, NCTE etc.

A large number of them “misused” the opportunity for commercialization of ODL system through unregulated expansion disregarding standards of education. The proliferation of such ODL Institutions are the main reason for deterioration of Indian education system, which are behaving like degree dispensing mills and has also affected the credibility and acceptability of such programmes adversely (see Table 6).

Table 6: Year-wise Growth of ODL Institutions in India

Year	Dual Mode Universities/ Institutes	Single Mode Open Universities	Total Distance Education Institutions
1962	1	-	1
1975	22	-	22

1982	34	1	35
1985	38	2	40
1990	46	5	51
2000	70	9	79
2005	106	13	119
2010	242	14	256

Source: <http://www.ugc.ac.in/deb/pdf/growthDEB.pdf>

Clash between Professional versus Support staff

In the development and progress of any educational institution, each and every staff has an important role whether it may be academic, non-academic or ministerial. Everybody should make one's optimum contribution. Unfortunately, there is always clash between Professional versus Support staff in almost all educational institutions in our country.

It may be teacher or scientist, they think that they are superior to the other staff and due to their emergence other supportive staffs are working in the organization. But they should realize that in any organization academics and administrative set-up work in tandem. Nobody is supplement to anyone. Both are complementary to each other and admittedly they should realize each other's importance in the effective functioning and growth of organization.

Conclusion

Getting a place in global ranking is a matter of pride for any educational institutions. Degradation of the Indian education system warrants a revival of intellectual convention. The malaise is deep-rooted and needs serious thinking and a complete overhaul of the India education system. It is high time for our policy makers to formulate a comprehensive plan for the educational institutions to meet global standards.

But, before taking any decision, a proper evaluation of the existing system is warranted. The government is investing huge amount of resources in higher education. The effort to increase 'quantity'

exponentially must be matched with commensurate efforts to improve 'quality'. We must lead our institutions into the ranks of the best global institutions.

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Sino-Sri Lanka Relations and India's Security

Puja Bansal*

[Sri Lanka's relationship with China dates back to several centuries. Sri Lanka's central position and the geo-strategic location in the Indian Ocean enhance its importance in terms of maritime trade and security. Sri Lanka's strategic location has encouraged China to develop a strategic relationship with Sri Lanka. China knows the geo-strategic significance of retaining in its footprint in Sri Lanka and the importance of keeping Sri Lanka as a friend to realize its global ambitions in the coming years.]

China believes that the primary tools for realizing mutual benefits and reciprocity are the expansion of trade investment relations and financial support for development projects. Sri Lanka is one of the key ports in the Indian Ocean and has also been a prominent locality to exchange goods. China desires to enhance its influence over the sea-lanes of communication (SLOCs) between Europe and East Asia and the oil tanker routes from the Middle East to this region.

Beijing is reportedly weaving a 'string of pearls' strategy around India. With Bangladesh, Myanmar and Pakistan forming part of this strategic circle, China wants to complete this encirclement around India by integrating Sri Lanka within it, to curtail India's presence in South Asia and the Indian Ocean region.¹

Sri Lanka is also strategically important to India for its Indian Ocean strategy and for networking its partners in the Indian Ocean Rim Community. The Chinese presence would thwart the Indian Navy, which has to circle the island nation, to transfer its naval fleets between the Bay of Bengal and the Arabian Sea.

China's strategic interest in Sri Lanka is increasing day-by-day. Many of Chinese-assisted projects like Colombo-container-terminal, Hambantota port and Mattala airport, satellite and telecom endeavours provide legitimate access to Chinese specialist personnel. Under President Xi Jinping efforts are

on to build closer strategic linkages with Sri Lanka. These will have serious connotations for India's national security and maritime security.

Chinese entry into real estate and some manufacturing projects is also coming through. Chinese language teaching and cultural spread are also on the cards as Confucius Centre is scheduled to open in Sri Lanka. In China's Indian Ocean strategy, relations with Sri Lanka are proving to be its greatest asset. China's plan to establish a "maritime silk road" across the region requires that China can maintain a constant naval presence.

In the South Asian context, India's emergence as a rapidly growing economic and military power dominating the Indian Ocean is adding to China's strategic concerns. China has unresolved border dispute and unfulfilled territorial claims with India. China nurtures deep suspicions about India's role in sustaining the activities of exiled Tibetan spiritual leader Dalai Lama as well as India's growing strategic relationship with the US and Japan. China appears to have realized the need to avoid head-on confrontation with India and build a win-win relationship taking advantage of each other's economic strengths.

China – Sri Lanka Relations

Sri Lanka has always been a centre of international attention since ancient times. Although it is a small island, Sri Lanka is an ideal place to access both the West and the East, the central position of Sri Lanka between the Straits of Malacca and Hormuz lies at the crossroads of all maritime routes in the

* PhD Scholar, Dept of Defence and Strategic Studies, Punjabi University, Patiala. (bansalpuja.13@gmail.com)

region.

China has been particularly attracted by that country's vantage location in the centre of the Indian Ocean, a crucial international passageway for trade and oil. Through Indian Ocean passes 70% of the global oil trade and 50% of container traffic. This sea route is operational with 36,000 ships passing through Sri Lanka's southern port of Hambantota annually, including 4,500 oil tankers.

For China, Sri Lanka represents a major attraction. It facilitates not only the supply of its fleet but will strengthen trade links with its southern province of Yunnan.² This strategic location has become of increasing interest to both world powers and emerging powers. If China attains a foothold in Sri Lanka, it will be easier for it to control the Indian Ocean and dominate the large part in Asia. Sri Lanka has had trade and diplomatic relations with ancient kingdoms in Asia and ruling empires in Europe.

China's oil import from Middle East is likely to reach 70% of its total oil imports. The oil from the Middle East reaches China through the sea route. China has wisely foreseen this energy dependence from the Middle East. To ensure smooth flow of oil from Middle East, China has identified the need to have control over this sea route in case of any conflicts. To protect this sea route, China has knit 'String of Pearls' along this sea route.³

Sri Lanka and China have enjoyed constructive diplomatic relations since the 1950s. Although witnessing change in the political context both locally and internationally, the Sri Lanka has considered China as its most trusted ally and friend in several stages. Hence relations between the two countries have blossomed over the years. The China-Sri Lanka Rice-Rubber Trade Agreement was signed in April 1952. The two countries established full diplomatic relations in February 1957.

The Agreement on Economic and Technological Cooperation between China and Sri Lanka was signed in 1962 and a Maritime Agreement in 1963. The Sri Lanka-China Business Cooperation Council (SLCBCC) was formed in 1994. These developments suggest that throughout this period,

China has been an important trading partner and a significant source of foreign economic assistance to Sri Lanka.⁴

In June 2002, China and Sri Lanka signed an agreement in which China provided weapons and agreed to assist in upgrading the Sri Lankan navy to prevent weapons smuggling by the Sri Lankan terrorist group the Liberation Tigers of Tamil Eelam.⁵ In May 2007 China and Sri Lanka signed the 'establishment of friendship city relationship' which was related to the Hambantota district for development of infrastructure.⁶

Sri Lanka signed agreements in 2009 with China's two defence entities- Poly Technologies Corporation and Norinco (China north Industries Corporation) for the supply of arms in ammunition. Sri Lanka has entered into an agreement with CATIC (China National Aero-Technology Import & Export Corporation) to purchase six MA-60 aircraft.

Even during Sri Lanka's operations against LTTE in 2009, it was reported that China provided Jian-7 fighter jets, anti-aircraft guns, type-85 heavy and type-80 light machineguns, type-56 rifles, 152mm howitzer, 81mm mortar shells, RPG-7 rockets and large quantities of ammunition.⁷

India's non-intervention policy provided China with an opportunity to make headway into Sri Lanka. There was an urgent need for India to take note of this growing Chinese influence in Sri Lanka. After the war, China became more intimate with that country. Important aspect of their relationship was the supply of more arms by China to Sri Lanka which the latter needed to fight with the Tamil militants in future also.

China also offered to build off-shore petrol craft for the Sri Lankan Navy.⁸ This afforded an opportunity for China to strengthen its role in port development and to improve the naval exchanges. The strategic implications of the second dimension ought to be a matter of growing concern for the Indian Navy.⁹ China funded Sri Lankan projects valued at US\$ 2,522 million in 2011, which inter alia included Sri Lanka Puttalam coal power project, the Mattala International Airport and the Colombo

Katunayake expressway.¹⁰

Apart from the above projects, new project agreements have also been signed in September 2012, for the construction of roads and flyovers under the Hambantota Hub development, communication, railway electrification.¹¹ In November 2013 Sri Lanka was to sign two mixed-development projects totaling \$700 million and also Sri Lanka was to sign \$2 billion worth foreign direct investment (FDI) deals, including the \$1.3 billion investment from China communications construction Co Ltd to build a port city.¹²

China has been a vocal supporter of Sri Lanka at the Human Rights Council, backing the island by voting against a U.S.-sponsored resolution calling for an international probe into Colombo's rights record. Some sections have been voicing concern over Sri Lanka's reliance on China and have noted that Sri Lanka's outstanding debt to China, in disbursed loans, was nearly Rs. 196 billion at the end of December 2013.¹³

On 16-17 September 2014, the Chinese President Xi Jinping held bilateral talks with President Mahinda Rajapaksa and also met with Prime Minister D. M. Jayaratne and Speaker of Parliament Chamal Rajapaksa of Sri Lanka and both countries signed a number of agreements in the areas of economy, science and technology and cultural exchanges. Both countries also signed number of Agreements covering bilateral economic cooperation, trade and commerce, power and energy, agriculture, education and culture, which would further strengthen the robust relations between the countries.

The two sides expressed their satisfaction with the outcomes of the joint feasibility study on the China-Sri Lanka Free Trade Agreement. Both sides announced the launch of the negotiations on the China-Sri Lanka Free Trade Agreement and expressed their commitment to ensure the early implementation and agreed that the FTA negotiations will be concluded at the earliest and agreed to work towards a more balanced and sustainable development of bilateral trade and economic cooperation in the fields of investment, joint ventures, bilateral trade, tourism, development projects and

capacity building.

The Joint Statement reaffirmed that the Chinese Government would continue to encourage competitive Chinese companies to invest and cooperate in technology-based next generation manufacturing activities in Sri Lanka to achieve mutual benefits. It also reiterated that Sri Lanka would continue to provide necessary assistance and institutional support.

The Chinese Government assured financing support for infrastructure and development projects agreed upon by both sides in Sri Lanka on superior terms. Even the two countries also agreed to strengthen defence cooperation, and to maintain the momentum of visits between the two defence authorities and military forces at all levels, intensify the cooperation in military training, training of personnel and to cooperate in the areas of defence-related science and technology, exchange of military academics, and provide logistic support.

The statement reaffirmed that China would provide Sri Lanka with more scholarships through relevant channels to encourage Sri Lankan students to study in China. Sri Lanka supports the efforts of the Confucius Institute to teach Chinese language in Sri Lanka.

China has assured Sri Lanka of its support to latter's application for Observer Status of the Shanghai Cooperation Organization (SCO) and is willing to encourage the SCO to strengthen cooperation with Sri Lanka. And Sri Lanka has also invited China as an 'Observer' in South Asian Association for Regional Cooperation (SAARC), which will support China's effort in enhancing its cooperation with SAARC.

Thereafter, the Chinese involvement in Sri Lanka for infrastructure development, economic aid, oil exploration, investment, trade and a strong diplomatic support to the island state has grown day-by-day.¹⁴

China's crushing strategic imperative in the Indian Ocean is to protect its Sea Lines of Communication (SLOCs), especially the transport of energy to China through Malacca Strait. China is keenly aware that

its SLOCs are vulnerable to threats from state and non-state actors. It faces a Hormuz Dilemma in the Persian Gulf, where some 40% of China's oil imports transit the Strait of Hormuz. China is even more vulnerable in the Malacca Strait, through which around 82% of China's oil imports pass.¹⁵

Sri Lanka has welcomed the proposal by China to build the 21st Century Maritime Silk Road, Having been located on the ancient maritime route between the East and the West, as recognized in the *Mahinda Chintana - Vision for the Future*, China is confident to say that Sri Lanka will see a lot of development opportunities and will play a very important role during the cultivation and building process of the new Maritime Silk Road. "The ancient Maritime Silk Road is refreshing and opening up new channels."¹⁶

It has been stressed that currently the Chinese people are striving to realize the "Chinese Dream" of achieving the great rejuvenation of the Chinese nation, and Sri Lanka has put forward the "Mahinda Vision" of national rejuvenation and development, and the objectives of the two sides correspond with each other. China has expressed its willingness to work with Sri Lanka to seize the opportunity, plan the cooperation, and promote the China-Sri Lanka strategic cooperative partnership for solid and in-depth development, so as to better benefit the two peoples.

The Chinese President has reportedly said that the new Maritime Silk Route proposed by China and the Mahinda Chintana vision were cut out for each other and would be most conducive for development of Sri Lanka, especially in port construction and development, expansion of the maritime economy and ensuring maritime security.

There was also an agreement on China - Sri Lanka Coastal and Marine Joint Research and Development. The two leaders discussed many areas of possible close cooperation including support for Chinese naval vessels in Sri Lanka, carrying out joint naval exercises for common areas of maritime safety, expanding military assistance to Sri Lanka, including training of military personnel, providing of a coastal patrol vessel and cooperation on JF17

jets.

Indian security concerns

India and Sri Lanka have traditionally enjoyed cordial relations. But, India's lethargic neighbourhood policy has created a vacuum, which the Chinese endeavor to fill. Regrettably, India's foreign policy is being dictated by domestic political compulsions, at the cost of India's national security interests.

The Sethu Samudram project was bogged down by domestic discord and bureaucratic red-tape for almost 150 years. It was first conceived in 1860, by a British naval officer, A.D. Taylor, around the same time when work started on the Suez Canal.

In the recent past, Sri Lanka has been pressing India for a Defence Cooperation Agreement. India, however, has been dithering on account of political compulsions in Tamil Nadu. Sri Lanka believes that stability can be ensured in the island nation with a comprehensive Defence Co-operation Agreement, reached with its large neighbour, committing to safeguard its security interests.

China's relations with India have gone through a rollercoaster from the highs of the early and mid-1990s to the lows of the late 1990s. Sino-Indian relations remain poor, with or without a risk of confrontation, despite a dramatic increase in bilateral exchanges at the political, economic, military and cultural levels including some high-level visits and the growing presence of the Chinese in Sri Lanka when India-Sri Lanka relations are under stress, has disturbing strategic connotations for national security.

Chinese leaders visit Sri Lanka to demonstrate a continuing determination to remain involved and a desire to reassure China's friends in the region that improvement in Sino-Indian relations would not be at their cost. India keeps a close eye on the political and strategic relations between China- Sri Lanka and India's neighbours.¹⁷

China wants good relation with India's neighbouring country for the growth of trade and building up its strategic assets and that's why China has stakes in

Sri Lanka. China has developed its 'string of pearls' to encircle India. China's links with Pakistan and the realm in Nepal are based largely on Beijing's desire to counter India both because of Sino-Indian hostility and because of India's link to Russia.

But, India is fully aware that its destiny is inseparable from what happens in its neighbourhood. For our own sustained economic development and the welfare of our people we need a peaceful and tranquil periphery. We also believe that the establishment of a peaceful neighbourhood is integrally linked to economic development in our neighbouring countries, an objective that would be best served by India giving access to its neighbours to its huge and growing market.

Economic integration in the sub-continent must restore the natural flow of goods, people and ideas that characterized our shared space as South Asians, and which now stands interrupted due to political divisions. India must reassure its neighbours that it respects their independence and sovereignty.

What it should not accept is unhelpful display of narrow nationalism based on hostility towards India that often becomes a cover for failure to deliver on promises made to their own peoples. This inhibits the development of normal relations, including economic cooperation and prevents our region from emerging as a region of both political stability and economic dynamism.

China's attention in Sri Lanka before and after LTTE and *entente cordiale* with Sri Lanka continues to develop good relations for trade in the Indian Ocean and China's relations with Pakistan continue to flourish, underpinned by nuclear and missile co-operation. India continues to keep a close eye on the political and strategic relations between China – India – Sri Lanka.

Current strategic and economic trends indicate that South Asia's importance in China's national security calculus is likely to increase in the 21st century. A Sino-Indian-Sri Lanka rivalry in southern Asia and the northern Indian Ocean may well be a dominant feature of future Asian geopolitics.

Conclusion

China has emerged as one of the important factors in India-Sri Lanka relations. China's strategy towards India has three elements: encirclement, envelopment and entanglement. In international relations' parlance, there are no permanent friends or enemies, only permanent interests. At this particular time in history it is Sri Lankan perception that China has offered unconditional and timely help for its overall development. It may seem obvious that silk and pearls match!

Viewed against the backdrop of clashes with India and the international calls for probes regarding allegations of war crimes and human rights violations during and after Sri Lanka's defeat of the LTTE it is obvious that deepening ties with China aligns with Sri Lankan interests.

This in turn doesn't mean that the deepening ties will hurt Indian interests. It just means that if India is serious about maintaining a positive influence in South Asia and in Sri Lanka in particular, it needs to modify its foreign policy to take into account neighbourhood interests that align with India's strategic outlook.

India while donning the mantle of regional and international super power must keep in mind that like other South Asian nations Sri Lanka is more than just a neighbour or in Sri Lanka's case India's teardrop. The Pearl of the Indian Ocean is one of the jewels of the scepter of South Asia and New Delhi needs to formulate policies that make more friends than enemies in its backyard by a process of prioritizing and matching interests.

Sri Lanka is the gateway to the control of resources and markets in the Near East, Middle East, and Asia. It lies at the crossroads of all maritime routes in the region. It is an economically booming region not mainly due to the rapid development of two giants: India and China, but also because of Iran and Pakistan.

Last year, China's aid to Sri Lanka totaled \$ 1 billion, ahead of Japan, whereas US aid to Sri Lanka amounted to only \$ 7.4 million and British aid \$ 1.9 million.¹⁸ Sri Lanka, even after its

independence, continued to depend on its membership in the greatest bloc which consisted of the UK, all the British powers, India, Pakistan, Burma, the Scandinavian countries, Argentina, Japan, France and many other countries in South East Asia. This membership in the greatest bloc seemed to be the most decisive factor in determining Sri Lanka's foreign policy in general and its trade policy in particular.

The economic and political affairs of South Asia have been dominated by the sea. Indian Ocean covers 20% of earth and ranked in third largest water coverage of the world. Indian Ocean Region comprises 38 littoral states, 24 Ocean territories and 17 landlocked countries. Two adjoining seas are connected with the Indian Ocean, the Arabian Sea and the Red sea, covering an area of 169,000 Sq. miles through the strait of Bab-el Mandeb, and Persian Gulf, through the straits of Hormuz.¹⁹

Sri Lanka is also rich in natural resources: tea, rubber, spices, and mineral resources such as graphite, gems (including sapphires), limestone, mineral sands, copper, iron, iron ore, dolomite, calcite, shale, clay, kaolin, etc. Other natural resources include phosphates and hydropower. Sri Lanka also has the most important herbal gardens, the world's largest variety of medicinal plants. These are the attraction points for interested countries in Sri Lanka.

China's policy is popularly known as 'String of Pearls', By developing friendly relations with Pakistan, Nepal, and Sri Lanka and trying to obtain some naval and air facilities in Maldives, China has thus attempted strategic encirclement of India and put India into a great disadvantaged position. It is a serious security concern for India.

China is gradually laying the foundations of a maritime infrastructure that would enhance the security of its energy transportation coming through the Indian Ocean. China has leveraged its strategic alliances with Pakistan and that have granted basing rights to Chinese ships coming through the Indian Ocean. Chinese strategists have urged Beijing to build oil pipelines through and Pakistan. The

Chinese government looks forward to ultimately bypass the Strait of Malacca by transporting oil and other energy products via roads and pipelines from these ports on the Indian Ocean.

Sri Lanka is important for India's national security. Over the years India considered Sri Lanka as the "underbelly" of Indian Ocean's security. Undoubtedly, the Island nation is fully aware of its importance to India. It also knows that India does not appreciate the country's growing relationship with China. Hence, it seems that what Sri Lanka is trying to do is to balance the pressure from India by becoming closer to China.

India has to understand its strengths and weaknesses when it comes to its role in a third country on development. It should strive to have an edge on any field it could. Resettlement in tourism, cultural exchange, and trade are few areas in which India has distinct advantages over the other countries. The most pivotal for India is to positively exploit the geographical aspect of proximity.

India should consciously build constituencies in the neighbourhood and should have dialogue with the concerned political, economic, social and cultural actors. If there are any apprehensions because of China, there is nothing wrong in dealing the issue bilaterally with China itself. India has to strike balance between regional long term peace, its own strategic interests and development of Sri Lanka and also other neighbouring countries.

Geo-strategically, India wields a huge influence over the sub-continent particularly on smaller countries like Sri Lanka. With China whittling away India's strategic sphere of influence in the South Asian neighbourhood, India has to consider not only its national interest but also the regional interest while taking decisions that affect its neighbours. And in Sri Lanka, China is emerging as a direct challenge to Indian presence. In fact, it effectively used the aftermath of the Eelam war to emerge as one of the two big investors and aid givers in Sri Lanka, the other being India.

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Tax Revenue *vis-à-vis* Public Revenue in India

Dr. Stanly Joseph P* & Prarthna P**

[Public revenue is the instrument through which the government raises resources and ensures optimum allocation and equitable distribution of funds. Tax revenue forms a major component of the public revenue and thus plays a vital role in economic development. In order to maintain their global competitiveness and growth, any government has to maintain a judicious tax structure in order to mobilize funds for maximizing economic growth and India is no exception. To perform many duties and functions, the government requires large amount of resources in the form of taxes.]

The choice of direct versus indirect taxes is fundamental to the optimal design of tax structures since those forms of taxation may affect differently the goals of efficiency and equity. Therefore, both direct and indirect taxes play a major role in the generation of revenue and hence, in the economic growth of the country. Insufficient tax revenue can distort resource allocation.

Hence, an ideal buoyant tax system (a tax is buoyant when tax revenues increase by more than one per cent for one per cent increase in GDP) is essential to achieve a balance between resource allocation and economic growth with stability. However, raising the revenue is not the only objective of taxation; it is also a potent instrument for the redistribution of income, consumption, savings, investment and production in an economy.

In this context, it is important to study the growth of direct and indirect tax revenues and the changing scenario of tax structure towards the GDP and the Public revenue.

In India, the authority to levy taxes is divided between the Union and the state governments under the relevant acts. The Union Government levies

direct taxes such as personal income tax, corporate tax, wealth tax and indirect taxes like customs duties, central excise duties, service tax and central sales tax. The states are empowered to levy state sales tax and other local taxes like entry tax octroi, etc.

The total revenue of the Government is composed of tax and non-tax revenues. Table 1 depicts the contribution of tax and non-tax revenues towards total revenue.

The non-tax revenue includes sources like interest receipts and fiscal services, dividend and profits from units like railways, postal and RBI, overseas communication services, power projects and other non-tax revenue receipts of union territories. The tax revenue includes the revenue from both direct and indirect taxes.

It is evident from the table that tax revenue is the dominant contributor towards total revenue over a span of forty years. Though the share of tax revenue is higher than non-tax revenue, its share has found to be declining i.e., from 80.78 per cent in 1975-76 to 75.85 per cent in 2014-15. On the other hand, the share of non-tax revenue is observed to be meagre ranging between 19 per cent in 1975-76 and 24 per cent in 2014-15.

* Associate Prof. in Economics, St. Joseph's College, Tiruchirapalli. (stanlyjosephp@gmail.com)

** Research Scholar. (prarthna.raj@gmail.com)

TABLE 1: Share of Tax and Non-Tax Revenues Towards Total Revenue

(Rs. in crore)

Year	Tax Revenue		Non-Tax Revenue		Total Revenue
	Amount	%	Amount	%	Amount
1975-76	11182	80.78	2660	19.22	13842
1980-81	19844	80.79	4719	19.21	24563
1985-86	43267	76.21	13506	23.79	56773
1990-91	87722	87.71	12287	12.29	100009
1995-96	175259	71.50	69849	28.50	245108
2000-01	305320	86.08	49362	13.92	354682
2005-06	587688	88.44	76813	11.56	664501
2010-11	1271665	85.33	218602	14.67	1490267
2014-15 (B.E)	1364774	75.85	434392	24.15	1799166

Source: Indian Public Finance Statistics 2013-14.

Budget Statement 2014-15.

B.E - Budget Estimate

The analysis of tax and non-tax revenue towards the public revenue depicts that the former has occupied the major share of revenue of the government owing to the increase in the collection from various individual taxes and also the wider coverage of tax. The tax revenue towards total revenue ranges from 71.5 (1995-96) to 88.44

(2005-06) per cents. The portion of non-tax revenue ranges from 11.56 (2005-06) to 28.5 (1995-96) per cents. Thus, taxation is the pre-eminent tool for revenue generation.

The following table presents the contribution of direct and indirect taxes towards the total tax revenue. Though the amount of revenue from direct and indirect taxes has been increasing in all the years, the percentage share of direct taxes in the total revenue has been on the increase and reverse situation prevailed in the percentage share of indirect taxes.

TABLE 2: Share of Direct and Indirect Taxes Towards Total Tax Revenue

(Rs. in crore)

Year	Direct Tax		Indirect Tax		Total Tax Revenue
	Amount	%	Amount	%	Amount
1970-71	1009	21.23	3743	78.77	4752
1975-76	2493	22.29	8689	77.71	11182
1980-81	3268	16.47	16576	83.53	19844
1985-86	6252	14.45	37015	85.55	43267
1990-91	12260	13.98	75462	86.02	87722
1995-96	35777	20.41	139482	79.59	175259

2000-01	71762	23.50	233558	76.50	305320
2005-06	167635	28.52	420053	71.48	587688
2010-11	450822	35.45	820843	64.55	1271665
2014-15 (B.E)	736221	53.95	628553	46.05	1364774

Source: Indian Public Finance Statistics 2013-14.
Budget Statement 2014-15.

It can be observed from the table that the percentage share of direct taxes has been declining from 1970-71 till 1990-91. In terms of composition of tax revenue there has been a steady decline in the share of direct taxes from 21.23 per cent in 1970-71 to 13.98 per cent in 1990-91. After the introduction of tax reforms in 1992, the revenue from direct taxes has grown faster than revenue from other taxes as well as GDP and consequently, the share of direct taxes increased by 20.41 per cent in 1995-96 to 35.45 percent in 2010-11. The budget estimate for the year 2014-15 shows a much higher percentage of 53.95 per cent.

The analysis shows that there had been significant progress in tax reforms particularly in tax administration that helped in the recovery of tax-GDP ratio from the year 2005-06 (Table No.3).

Indirect taxes play an important role in revenue generation but it can be observed from the above table that the revenue from indirect taxes has been declining during the last few years. The share of indirect taxes increased from 78.77 per cent in 1970-71 to 86.02 per cent in 1990-91. However, in the Reform period, its share declined from 79.59 per cent in 1995-96 to 46 per cent in 2014-15. Besides, the ratio of revenue generated from direct taxes is more than that of indirect taxes.

It is evident from the above table that the share of direct tax has been on a much lower range upto 1990-91. This might be due to the lower contribution of personal income tax and corporate tax which are the major contributors towards direct tax revenue. Afterwards the share has been increasing due to the emergence of corporate sector which was witnessed only after the Reform i.e., after 1991.

The major proportion of indirect taxes can be attributed to the higher rates of sales tax, customs and excise duties.

The Budget estimate of 2014-15 indicates a much higher share of direct tax with 53.95 per cent and 46.05 per cent of indirect tax. Hence, it is said that indirect tax is losing its share in the total tax revenue of Central Government and direct taxes have gained prominence with growing economy.

Thus, it is clear from the foregoing table on the share of direct and indirect taxes towards total tax revenue that the contribution of direct tax has been decreasing in the Pre-reform and increasing in the Reform periods. On the contrary, the contribution of indirect tax has been increasing in the Pre-reform period but decreasing in the Reform period.

The tax-GDP ratio highlights the proportion of tax revenue in the total GDP of our country. This ratio in a country exposes the amount of tax revenue which supports the Public expenditure

TABLE 3: TAX-GDP RATIO

(in %)

Year	Direct Tax-GDP	Indirect Tax-GDP	Overall Tax-GDP
1970-71	2.18	8.09	10.27
1975-76	2.96	10.32	13.28
1980-81	2.25	11.40	13.65
1985-86	2.22	13.16	15.38
1990-91	2.15	13.25	15.40
1995-96	3.00	11.70	14.70
2000-01	3.41	11.11	14.52
2005-06	4.54	11.37	15.91
2010-11	5.78	10.53	16.31
2013-14	5.97	11.90	17.87

Source: Indian Public Finance Statistics 2013-14.

Table 3 explains the Tax-GDP ratio, both for direct and indirect taxes for the period ranging from 1970-71 to 2013-14.

The overall tax-GDP ratio has been increasing over the years from 1970-71 to 2013-14. This ratio was 10.27 per cent in 1970-71 which was increasing up to the year 1990-91. But it declined to 14.70 and 14.52 per cents in 1995-96 and 2000-01 respectively. Again it has increased to 17.87 per cent in 2013-14. Regarding the ratio of direct tax-GDP, it remains more or less the same in the years 1970-71, 1975-76, 1980-81, 1985-86 and 1990-91.

It was ranging from 2.15 to 2.96 percents in these years. But this ratio increased from 3 per cent in 1995-96 to 5.97 in 2013-14. The ratio of indirect tax-GDP is greater than the proportion of direct taxes in general. It increased from 8.09 per cent in 1970-71 to 13.25 per cent in 1990-91. From 1995-96 onwards the ratio was more or less constant.

The foregoing analysis of Tax-GDP ratio explicates that the overall tax-GDP ratio shows an increasing proportion over the years and the proportion of indirect tax-GDP ratio has been higher in all the years compared to the ratio of direct tax-GDP.

Tax occupies a position of strategic importance in the overall development of the country due to its significant contribution to the national exchequer which is ultimately spent on the overall development of different sectors of the economy.

The present analysis also reveals the importance of taxation by highlighting its dominant share in public revenue. The revenue receipts in the budget proposals include tax revenue as a major portion. The revenue deficit is also affected by the amount of tax revenue. So, the various taxes, including both direct and indirect, have their own impact on the economy as a whole. Therefore, it needs to be emphasized that policymakers would need to examine very carefully the trade-off between growth enhancing proposals and other objectives of tax system, particularly equity. ◆◆

Statement about ownership and other particulars about newspaper (THIRD CONCEPT)

FORM IV

(See Rule 8)

1. Place of Publication New Delhi
2. Periodicity of its publication Monthly
3. Publisher's Name Babuddin Khan
Nationality Indian
Address LB – 39, Prakash Deep Building, New Delhi – 110001.
4. Printer's Name Babuddin Khan
Nationality Indian
Address LB – 39, Prakash Deep Building, New Delhi – 110001.
5. Editor's Name Babuddin Khan
Nationality Indian
Address LB – 39, Prakash Deep Building, New Delhi – 110001.
6. Name and Address of Individual who own the newspaper and partner of than One percent of the total capital Babuddin Khan
LB – 39, Prakash Deep Building, New Delhi – 110001.

I, Babuddin Khan, hereby declare that the particulars given above are true to the best of my knowledge and belief

BABUDDIN KHAN

Signature of Publisher

Dated: 28 – 2 – 2014

FDI and Exports in India: An Overview

Dr. C.Prabu*

[The role of FDI as a catalyst of industrial development has been long recognized as one of the main positive influences that FDI brings in the host country. As a matter of fact, MNEs are considered to be owners of superior firm-specific assets that they cannot completely protect from spilling over to local firms. However, according to the wide empirical evidence available, there is still some ambiguity regarding the positive benefits of FDI in the host economy, as only mixed results have been found. Various reasons need to be taken into account to explain the mixed results found out across studies: for example, the absorptive capacity of the domestic firms, the technology gap between foreign and local firms, the role of spatial proximity effects and the motivations for which MNEs invest in a specific host country.]

Up to now, the literature has mainly focused on the effects observable on the final level of productivity. Nevertheless, there is an important aspect that has not been properly investigated: that is, the effect on the level and the decision to enter the export market. Indeed, it is commonly accepted that the level of exports of a country represents an indicator of economic development, as, at the country level, exports and economic growth are highly and positively correlated.

FDI: The Historical Perspective

Till 1991, inflows of private capital from overseas were negligible and averaged less than \$200 mn a year in the period 1985-90. This was probably a superior situation to the negative net flows caused by factors such as nationalization of foreign oil companies in the 1960s and the closure or sell-out of foreign companies in the 1970s.

It took a very serious Balance of Payments crisis and a possible defalcation in external payments obligations to make the Indian Government decide on radical surgery, a process facilitated to some extent by the pressures to ease up on regulation and liberalise the economy. Foreign investment which had till then been viewed with mistrust and

suspicion was overnight being welcomed, indeed wooed.

Initially, funds flowed in from Foreign Institutional Investors (FIIs) and Indian companies using the Global or American Depository Receipt (GDR/ADR) route to raise funds from overseas. The Indian Corporate sector was wary of Foreign Direct Investment (FDI) and lobbied strongly with the government to prohibit and if not, to defer the entry of foreign companies.

Inflow of FDI

Foreign Direct Investment (FDI) inflow into the core sectors is assumed to play a vital role as a source of capital, management, and technology in countries of transition economies. It implies that FDI can have positive effects on a host economy's development effort. On this line, it has been argued that FDI can bring the technological diffusion to the sectors through knowledge spillover and enhances a faster rate of growth of output via increased labour productivity in India.

There were also few evidences to demonstrate that there is a long-run relationship between Gross Domestic Product, FDI and export in India. In fact, many countries like India have offered incentives to encourage FDI to their economies. India has also opened up its economy and allowed MNEs in the core sectors such as power and fuels, electrical equipments, transport, chemicals, food processing,

* Asst. Prof., in Economics, Sir Theagaraya College, Chennai.

metallurgical, drugs and pharmaceuticals, textiles, and industrial machinery as a part of reform process started in the beginning of 1990s.

In this context, it is imperative to assess the impact of FDI inflows in to these core sectors in India. It is also motivated by recent political developments in India following the opening of sectors like insurance and telecommunication with increased financial gap for the private players. In particular, the Left parties, which had been main coalition partner of the erstwhile UPA government in India, are not in favor of increased financial gap to the private players in the sectors of insurance and telecommunication and also disinvestment of public enterprises.

An empirical analysis could offer a basis for the further opening up the economy if FDI inflows into the core sectors set a positive spillover in the economy in India.

Dimensions of FDI in India

The dimensions of the FDI flows into India could be explained in terms of its growth and size, sources and sectoral compositions. The growth of FDI inflows in India was not significant until 1991 due to the regulatory policy framework. However, under the new policy regime, it is expected to assume a much larger role in catalyzing Indian economic development.

It could be observed that there has been a steady build up in the actual FDI inflows in the post-liberalization period. Actual inflows have steadily increased from Rs. 3,514.30 million (US \$ 143.6 million) in 1991 to Rs. 143,009.40 million (US \$ 3,108.9) in 2003. This results in an annual average growth rate close to 6 per cent. However, the pace of FDI inflows to India has definitely been slower than some of the smaller developing countries like Indonesia, Thailand, Malaysia and Vietnam (WIR, 2005).

In fact, India has registered a declining trend of FDI inflows and the FDI- GDP ratio especially in 1998 and 2003 could be attributed to many factors, including the US sanctions imposed in the aftermath of the nuclear tests, the East Asian melt-down and the perceived Swadesh image of the Bharatiya

Janata Party (BJP), which was ruling government during this period in India.

It is also important to note that the financial collaboration has outnumbered the technical collaboration over the years. The analyses of the origin of FDI inflows to India show that the new policy has broadened the source of FDI into India.

FDI and Exports in India

Until 1990, the Indian economy was characterized by severe controls and regulations on foreign capital and ownership. The adoption of controls on production of goods and services during the first three decades since independence led to the deterioration of India's competitiveness and lackluster performance in the world market. This was complemented by the adoption of policies like industrial capacity licensing and regulations on capital goods imports and foreign collaborations.

During the regulated regime, foreign investment was considered as a means to obtain technology previously unavailable in India. The most preferred mechanism to acquire technology during this period was through imports of capital goods and licensing agreements (Kumar 1994).

However, in reality, the dirigisme regime stood as a major stumbling block in obtaining much needed modern technology. While tracing the government policies toward FDI in India, one can broadly classify the periods as pre-reform (1948-1990) and the reform period (from 1991 to present). The period from 1948 till 1990 witnessed a cautious and restrictive approach towards FDI. The pre-liberalization framework has been extensively analyzed previously by Kumar (1994).

The period from the beginning of nineties witnessed the beginning of the liberal attitude towards FDI. The occurrence of the unprecedented economic crisis in 1991 forced the policy makers to transform the highly regulated regime. Accordingly, the adoption of new liberalized regime since 1991 dismantled the industrial licensing system and removed restrictions on foreign equity participation.

Since its adoption, Indian economy has witnessed a large surge in FDI. In the same way, India

experienced a large increase in exports and imports as well. Especially with regard to exports, it is possible that they started rising even before the beginning of the period of great liberalization and that rise in imports has been even greater across the whole span of time.

It indicates that local firms had drawn a lot from foreign sources in terms of both technology and intermediate inputs. With regard to this trend, some studies have analyzed the Indian post-liberalization period characterized by the greater involvement in international trade activities.

Poddar (2004) analyses the determinant of export increase by looking at the micro-foundations of export success. He finds that the increase in export intensity in Indian manufacturing is mainly due to the higher export intensity of incumbent firms rather than the entry of more export-oriented firms that causes a rising of the overall export performance.

Conclusion

The literature about spillover effects coming from FDI has reached only inconclusive and mixed results. However, very few studies take into account the possibility that the effect of MNEs on local firms may be related also to exports. In particular, the developing countries are scarce almost non-existent. India is worth exploring as a case study because of the large overall export growth since the trade reforms started in 1991 that improved the level of international economic openness.

The main significant results are relative to the fact that different types of MNEs have influences only on the export intensity of firms but not on the export decision. This may be due to the fact that we only considered heterogeneity according to the demonstration effect and that the different types of firms are so heterogeneous from the firm level variables that the final effect on export decision equation is blurred.

Some other important results need to be underlined: they are relative to the fact that when considering local firm heterogeneity MNEs affect even the export decision. The combination of heterogeneity

may give rise to results that confirm that according to the sample considered MNEs may act both on export decisions and on export intensity.

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Women and Media

Deepan Das*

[Undoubtedly, the media is a pervasive and profoundly influential socializing force; nevertheless, parents and teachers can still make a difference. Young children are especially vulnerable to the teachings of media because they don't have the critical capacity necessary to distinguish between fantasy and reality, to identify persuasive intent, or to understand irony and disregard stereotypes.]

The cumulative and unconscious impact of these media messages can contribute to limiting the development of a child's potential. The image and representation of women and girls in the media has long been a subject of concern. Research shows that there are many fewer females than males in almost all forms of mainstream media and those who do appear are often portrayed in very stereotypical ways.

Portrayal of women in media

In everything from advertising, television programming, newspaper and magazines, to comic books, popular music, film and video games, women and girls are more likely to be shown: in the home, performing domestic chores such as

laundry or cooking; as sex objects who exist primarily to serve men; as victims who can't protect themselves and are the natural recipients of beatings, harassment, sexual assault and murder.

Men and boys are also stereotyped by the media. From GI Joe to Rambo, masculinity is often associated with machismo, independence, competition, emotional detachment, aggression and violence. Despite the fact that men have considerably more economic and political power in society than women, these trends - although different from those which affect women and girls - are very damaging to boys.

Research tells that the more television children watch, the more likely they are to hold sexist notions about traditional male and female roles and the more likely

* Asst. Prof., Dept of Pol. Sc., R. G. Baruah College, Guwahati (deepand600@gmail.com)

the boys are to demonstrate aggressive behaviour.

Mass media uses stereotypical characters to make it easy for the audience to identify the good guys or gals and the bad guys or gals. It is easier to create programs around stock characters than to develop varied personalities. Stereotypes limit our views of ourselves and others and of the reality of the world.

The media construct their own version of reality. The point of view of the message presented is driven by ethical, political, economic and social standards of the producers. Characters often reflect a narrow range of roles.

The elderly are under-represented. Women and girls are both under represented and portrayed in a very limited set of roles. Victims of violence are usually portrayed as young and beautiful women. Visible ethnic minorities often appear in limited roles. People depicted as intelligent (especially children and adolescents) are often portrayed as unattractive as well.

Renowned poet Kishwar Naheed of Pakistan, while speaking recently at the launch of the Pakistan Women Media Complaint Cell (PWMCC) has urged both print and electronic media to play a responsible role while highlighting women issues.

The PWMCC is a joint effort of the National Commission on the Status of Women (NCSW) and the Uks Research Centre to monitor, promote and ensure gender responsiveness within the media.

Initially, the cell will start functioning from March 1 as a trial run for three months and may be extended afterwards. The cell will be an independent body and entertain complaints from the public against print and electronic media. "Both electronic and print media should treat women with respect, dignity and honour regardless of their profession, caste and creed," Naheed said.

She expressed displeasure at some of the media outlets which promote a negative image of a woman associated with the fashion and film industries and sensationalist newspapers that use objectionable

words while reporting on women.

"The print media need to be very careful and selective while using words to highlight a woman as slight irresponsible use of a word could tarnish her image in the society," she said.

Provocative images of women's partly clothed or naked bodies are especially prevalent in advertising. Shari Graydon, former president of Canada's Media Action Média, argues that women's bodies are sexualized in ads in order to grab the viewer's attention. Women become sexual objects when their bodies and their sexuality are linked to products that are bought and sold.

Media activist Jean Kilbourne agrees. She notes that women's bodies are often dismembered into legs, breasts or thighs, reinforcing the message that women are objects rather than whole human beings.

Although women's sexuality is no longer a taboo subject, many researchers question whether or not the blatant sexualization of women's bodies in the media is liberating. Laurie Abraham, executive editor of *Elle* magazine, warns that the biggest problem with women's magazines is "how much we lie about sex." Those "lies" continue to perpetuate the idea that women's sexuality is subservient to men's pleasure.

In her study of *Cosmopolitan* and *Playboy* magazines, for example, Nicole Krassas found that both men and women's magazines contain a single vision of female sexuality—that "women should primarily concern themselves with attracting and sexually satisfying men."

Women professionals and athletes continue to be under-represented in news coverage, and are often stereotypically portrayed when they are included.

Although there has been a steady increase in the number of women professionals over the past 20 years, most mainstream press coverage continues to rely on men as experts in the fields of business, politics and economics. Women in the news are more likely to be featured in stories about accidents,

natural disasters, or domestic violence than in stories about their professional abilities or expertise.

Women in politics are similarly sidelined. Canadian journalist Jenn Goddu studied newspaper and magazine coverage of three women's lobby groups over a 15-year period. She discovered that journalists tend to focus on the domestic aspects of the politically active woman's life (such as "details about the high heels stashed in her bag, her habit of napping in the early evening, and her lack of concern about whether or not she is considered ladylike") rather than her position on the issues.

Quebec's political analyst Denis Monière uncovered similar patterns. In 1998, Monière analysed 83 late evening newscasts on three national networks—the Canadian Broadcasting Corporation, Radio-Canada (the French-language public broadcaster) and TVA. He observed that women's views were solicited mainly in the framework of "average citizens" and rarely as experts, and that political or economic success stories were overwhelmingly masculine.

Inadequate women's coverage seems to be a worldwide phenomenon. In 2006 the Association of Women Journalists (Association des femmes journalistes – AFJ) studied news coverage of women and women's issues in 70 countries. It reported that only 17 per cent of stories quote women; one in 14 women was presented as a victim (compared to one in 21 men) and one in five women was shown in the context of her family (compared to one in 16 men).

Professor Caryl Rivers notes that politically active women are often disparaged and stereotyped by the media. When Hillary Clinton was still first lady, she was referred to as a "witch" or "witchlike" at least 50 times in the press. Rivers writes, "Male political figures may be called mean and nasty names, but those words don't usually reflect superstition and dread. Did the press ever call Presidents Carter, Reagan, Bush, or Clinton warlocks?"

Women athletes are also given short shrift in the media. Margaret Carlisle Duncan and Michael Messner studied sports coverage on three network affiliates in Los Angeles. They report that only nine per cent of airtime was devoted to women's sports, in contrast to the 88 per cent devoted to male athletes. Female athletes fared even worse on ESPN's national sports show *Sports Center*, where they occupied just over two per cent of airtime.

Duncan notes that commentators (97 per cent of whom are men) use different language when they talk about female athletes. Where men are described as "big," "strong," "brilliant," "gutsy" and "aggressive," women are more often referred to as "weary," "fatigued," "frustrated," "panicked," "vulnerable" and "choking." Commentators are also twice as likely to call men by their last names only, and three times as likely to call women by their first names only. Duncan argues that this "reduces female athletes to the role of children, while giving adult status to white male athletes."

The Prix D  meritas (Brickbat Prize) for sexist reporting was awarded by Quebec's *Gazette des femmes* to the journalists who covered the 2000 International Women's Tennis Cup. The *Gazette des femmes* noted in particular the journalists' keen interest in any of the athletes' poses that could be seen as suggestive, as well as the excessive attention accorded to Anna Kournikova—for her beauty rather than her game.

Media images of women in sports are also very different from the familiar pictures of male athletes in action. Female athletes are increasingly photographed in what Professor Pat Griffin calls "hyper-sexualized poses." Griffin has observed: "When it was once enough to feminize women athletes, now it is necessary to sexualize them for men. Instead of hearing, 'I am woman, hear me roar,' we are hearing 'I am hetero-sexy, watch me strip.'"

Media is expected to act as the fourth pillar of the democracy and it is being done by many dedicated

and courageous journalists too. In the recent past we witnessed a great job done by Indian electronic media to unearth the scams and corruptions cases. It may be CWG scam or 2G scam; media played a vital role to pull out the corruptions to light.

But at the same time, the incident of paid news and yellow journalism are increasing day by day. It will not be enough to say that some of so called journalists are creating news to save their job! And the GS Road molestation case in Guwahati is the result of such frustration.

Role of media is negative in representing women's issues but a true and dedicated media can play a crucial role in counteracting the impact of these messages. Helping people to understand that media construct - as opposed to reflect reality; that they communicate implicit and explicit values; and that they can influence the way we feel and think about ourselves and the world, are vitally important lessons towards achieving a society in which women and girls are seen and treated as equal to men and boys.

Aspects of women oppression in media

Following are some of the factors that shed light on few aspects of female oppression in media.

Casting of women as saleable commodity

Both electronic and print media use women models

to advertise different products of the business houses. In these advertisements the media project women only as a commodity which is a devaluation of women community. Moreover, the women do not get adequate wage for their work as model.

Biased role of media

Generally, the media emphasize on men's power than women. In the news of rape or molestation also the media show/publish the news in such a way that indirectly makes woman responsible for all that happen to her. It will not be enough to say that some of the so-called journalists are creating news to save their job! And the GS Road molestation case in Guwahati is the result of such frustration.

Insecurity of working women in media

It has been often reported that women working in media houses are faced with incidents of harassment and feel insecure in the workplace. Incidents of rape, molestation, sexual harassment etc are the common problems of women workers. Sometimes, they face physical assault also while collecting news from different places. Moreover, their co-workers and bosses too create problems for them. The recent 'Tehelka case' is such an example, wherein the editor of Tehelka, Tarun Tejpal, has been accused of raping and assaulting the modesty of a junior female colleague.



PERSPECTIVES ON WOMEN

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Ethical Perspective of Women towards Environment

Mrs.S.Velanganni* & Mrs. M. Aaakina Barveen** Dr. D. Jeba Selvi Anitha***

[Women are prone to play vital role in the management and sustenance of environment. Their active participation in ensuring judicious use of natural resources is almost a sine qua non for achieving sustainable development. Almost every woman in rural area maintains a kind of relationship with environment. Domestic chores performed by rural womenfolk such as water, fodder, fuels etc are fulfilled by working in the forests and fields. Undoubtedly, the life style of women in urban area is different from rural area; nevertheless, they are also engaged in harnessing water and energy resources for domestic resources. This makes women developing peculiar relationship with environment. Women have closer relationship to the nature than men which makes them more significant agents of preserving the eco-system in a proper way. Ed.]

Economics and ecology are interrelated subjects and ecology is regarded as the permanent economy. The development of all nations is dependent on the proper utilization of nature (Environment) and Economics. Adam Smith, the father of Economics says that 'Economics is a science of wealth.' That means how wealth is produced, exchanged and distributed. He says that, out of self-interest, man earns wealth and individual's wealth becomes nation's wealth.

Likewise, environment is a multidimensional subject. It is closely connected with economics, business, ethics and culture. Business makes employment opportunities available to an individual and wealth to a nation. "Environment is always helpful to Economics, but Economics is always harmful to Environment". Today's business is carried out based on self-centered and self-interested attitude. In this paper, the authors have made an attempt to present their views on the perception of women towards economics and environment.

* Assistant professor in Economics, Jayaraj Annapackiam College for Women (Autonomous), Periyakulam. Theni (Dt) Tamil Nadu. (veni.issac@gmail.com)

** Assistant Professors, Department of Commerce, J.A. College Periyakulam, Theni (Dt) Tmail Nadu.

Importance of sustainable development

Oxford dictionary says that "the development is a stage of growth or advancement". It is mentioned as an act or an instance of developing or a process of being developed. That means, development is a process by which people meet their requirements and improve their living conditions only when such development leads to social, economic and cultural betterment that satisfies the needs and values of all interested groups, not only for the present but also for the future by conserving natural resources and through diversity of life, it becomes sustainable.

The World Commission on Environment and Development (WCED) has stressed that the world's desire is sustainable development. This can be attained by the policies and the programmes carried out on the basis of equal emphasis on economics and environment. Such policies can be framed only by understanding the consequences of the depletion of natural resources and the faster growth of industries. The outstanding women environmentalists' perceptions have to be considered while framing and implementing such national and international policies.

Economics and Environment

"We want to have infinite growth out of finite

resources of nature.” Human life cannot exist in isolation. The life depends on the nature (environment). The economic life, social and cultural activities of mankind are shaped by environment. “Mother nature is beautiful in giving all the resources to be shared by all living beings on this globe. She gives the gifts freely. At the same time, economics is the science which tells about utilization of resources given by the nature for the development of humanity.

Professor Lionel Robins has stated that the wants are unlimited but means are limited. So the man has to find out and select alternative choices to use the limited resources without destroying them. Proper utilization of economic and natural resources is very essential in this competitive world.

Besides utilizing the resources for the production of materials, the production process pollutes nature by emissions and wastes. There must be a proper trade transaction between economic development and exploitation of resources without impairing the ecological balance. Factors like mushroom growth in special economic zones, rapid industrial development, rapid pace of urbanization due to migration of rural population to urban and semi urban areas etc have contributed to the loss of cultivable land.

Infrastructural development to accommodate mega industrial projects and expansion of rail and road transport has further contributed to shrinking of agricultural land. Development without affecting the nature is the only viable and acceptable solution for sustainability. But it is not an easy job. That will take much time, and it needs the co-operation among business people, academicians, economists and ecologists. They have to frame such policies and those policies have to be supported and suggested by the government bodies.

Women and ecology

Women have vital roles in environmental management and development. Their full participation is essential to achieve sustainable development. Every woman in rural area has a kind of relationship with environment. Their daily routine requirements such as water, fodder, fuels etc are

fulfilled by working in the forests. But the life style of women in urban area is different from rural area. Women particularly living in pastoral background have peculiar relationship with environment. Women have closer relationship to the nature than men which makes them to manage the eco system in a proper way.

Rural area covers nearly 2/3rd of the total population in India. The rural women have more chances to be with nature. Women are very close to life-supporting system like water and fuel; though they get credits for nurturing these life-supporting systems, concurrently it leads them to a big problem when the environment is polluted.

In addition to that, women are affected by the environmental degradation. It is mentioned in journal *United Nations Chronicle* that breast cancer, abortion and skin problems are the outcome of much usage of pesticides. Another serious problem which is mentioned in the ‘*Daily Thanthi*’ is that, around 415 new born children have been identified with various diseases in Tirupur district recently.

Tamil Nadu Health Ministry says: “If we don’t take the matter seriously it will result in increasing number of disabled children in future. Waste Effluents from the dying industries are the causes for such diseases.” It has been mentioned in *Dhinakaran* (daily) that 600 persons have been affected by various diseases in Thane, Maharashtra, due to improper management of chemical Industries’ waste management system.

Following are the perceptions of some of the outstanding women Environmentalists:

- 3 Wangari Mathai, the Nobel Prize winner who started the Green Belt movement has coined a slogan that “Ecology is the permanent economy”.
- 3 Chendi Prasad-led Chipko Movement that emphasized on preservation of trees for maintaining eco-equilibrium.
- 3 Rachel Carson, a scientist-writer and ecologist, has written a book titled *Environment, Silent Spring*. In her book, she has warned that

whatever is done to the nature by man that is eventually done to himself.

- 3 Maria Cherkasov, who is a journalist, ecologist and director of Centre for Independent Ecological Programmes, has pointed out that the industrial activities such as the use of pesticides damage the earth, ecosystem and it leads to ecological consequences which is a threat to human health.
- 3 Medha Pateker is an outstanding Indian woman environmentalist and a social worker who has been creating awareness among the people about environmental degradation.

Need for Sustainable Economics

India is one of the top among twelve countries known for its pure water. Only 45% of India's overall environmental compliance is facilitated by industries and the yield is clean production. The latest techniques are not updated in many industries. As we know economics is the study of scarce resources in the process of satisfying human needs, economics and the cost of exploiting resources in the environment and the consequential benefits that arise in the society is large in number.

By the development of science and technology, the environmental resources are over-exploited. It leads to imbalance in the eco-system. The environmental pollution leads to more damage than welfare. Economics enters in every aspect of our life, society and environment. The mantra of the sustainable economics is conserving environment, making a visit to the nature, educating the younger generation about the beauty of nature, doing business at the common goal and so on.

Conclusion

The noted development economist Amartya Sen has argued that "There is no escape from considering both the question of what (policy) is fundamentally valuable and what instruments can enhance these things best". He thus urges economists and researchers to confront ethical questions about development. Sen argued that the fundamental goal of development should be to create social and

economic institutions within which every individual is enabled to fulfill his/her capabilities and to realize the functioning of a full human life (development as freedom).

This is an important forum for philosophers and practitioners to come together to discuss the ethical issues of development. Green consumerism and green markets are to be developed, promoted and practiced by the producers and consumers, since it shows their ethical perspective towards environment. Man has been tempering with the ecosphere for millions of years and now he has been forced to realize that resources which were abundant have become scarce.

So everyone should understand the link between economics and environment. If we don't mind about the above said calamities, a day will come when the living beings on earth will be doomed to perish for want of good air, water and food. In other words, we create harm to the future generation and we don't have ethics even in our life supportive system. So women's ideas, perception, involvement have to be supported and encouraged in all aspects of sustainability.

In this regard, one is reminded of what Swami Vivekanand has said: "Women education must be an eye-opener in all matters. Character is formed by good education, strength of mind... the intellect is expounded by education, and by which one can stand on one's own feet".

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How Timothy Leary Changed America?

Eddie J. Girdner*

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[In 1971, the then President of the United States, Richard Nixon, thought that Timothy Leary was “the most dangerous man in America.” Leary appeared to be a peaceful man, always smiling. Why was he considered more dangerous than the most brutal and violent killer one could find in America? Anger and brutality seemed to be no threats to the United States of America. But spreading sentiments of love and peace among the larger population was seen to be the gravest threat. Indeed, the threat of peace is so serious that it threatened the very social, economic, and political fabric of America at its root. Sentiments of love and peace are the gravest threats to capitalism and imperialism.]

In the sixties, it was imperative for the American system and the American Empire that those who wanted to “give peace a chance” had to be crushed, destroyed, and rooted out. The cultural revolution of the sixties in the United States was dangerous to the ruling class when peace was about to break out at the time America was waging a colonialist war against Vietnam.

Just when the US needed soldiers to kill communists in Asia, people’s minds were being blown, or rather expanded, all across America. A cultural revolution was beginning in the 1960s, leaving the “square” and normal fifties generation behind. Not only was a new generation going to the universities in greater numbers, many began to discover that there were ways to expand their consciousness far beyond anything that they could learn from the books.

Timothy Leary thought that society could be changed through psychedelic substances, particularly LSD. Leary said: “The kids that take LSD aren’t going to fight your wars, middle class, middle age, whiskey-drinking generals. They’ll not join your corporations, middle class, middle age, whiskey-drinking corporation presidents.”

But telling young people to reject the values of their parents was equivalent to declaring war on American society as it existed in the sixties. Leary told students to start a drop-out movement on their college campuses. He said: “Our aim is to transform American society. In the next five to ten years we

expect that between twenty and thirty million Americans will be taking LSD regularly in their spiritual development and psychological growth.”

Looking back on the situation, the ignorance of American society rather boggles the mind. The attempt by courageous individuals to open the minds of America and expand their consciousness met with crushing reaction. At the forefront of this movement was a figure perhaps not well recognized by today’s youth. Timothy Leary became the pivotal figure and the old established system predictably came down upon him very hard. He found himself in prison.

This book is a very informative biography of Timothy Leary, the “mad scientist” of the sixties. I had known about him, but did not know the inside story and what really happened. When the information one gets is filtered through the corporate press, one gets mostly lies about a figure like Leary that goes against the mainstream society. One comes to think of the person as a dangerous crackpot who is not only evil, but also insane.

Leary’s life is quite mixed, sometimes quite wild. Sometimes an active professor at Harvard University receiving research grants and constructing a path-breaking theory of human behavior and at other times engaged in wild sexual orgies. It has been said that his life was “flat out epic grandeur.” Being so unconventional, he became alienated from mainstream society. In many ways, he was a pioneer in attempting to understand the brain in a scientific

way and pushing the frontiers of consciousness.

Predictably, with President Richard Nixon out to get him, he ended up in prison in California in 1970, given a long prison sentence for having one eighth of an ounce of marijuana. It seems that he was too smart to stay in prison. His wife and friends vowed to get him out and organized a jail break. It could work only because Leary was not in one of the high-security prisons. On the night he busted out, he wrote a note for the prison guards. This was in 1970.

“In the name of the Father and Mother and the Holy Ghost, Oh Guards, I leave now for freedom. I pray that you will free yourselves. To hold man captive is a crime against humanity and a sin against God. Oh Guards, you are criminals and sinners. Cut it loose. Be free. Amen.”

Leary was at the California Men’s Colony at San Luis Obispo, a low security prison. At this time, he was a 49 year old academic. He was not considered an escape risk because of the results of some psychological tests he was given. When Leary saw the questions on the exam, he realized that he had, himself, written the questions years ago, and so he knew how to answer them to fool the authorities.

In his youth, Leary had joined the US Army. He went to the military academy at West Point, New York. But he was not cut out for military life and got into trouble. He wanted to think for himself and question authority. But in 1942, he was back in the Army and became a psychologist. It was here that he began to question the psychological model that was used in the United States up through the 1950s.

In this view, there were two types of behavior, the normal and the abnormal. Abnormal meant those who were unmotivated, homosexual, radical, and so on. There were various ways to deal with “deviant behavior.” Two methods were electric shock and drugs such as Thorazine.

When the war was over, in 1946, Leary went to the University in Berkeley, California, and got a Ph.D. in psychology. He had the IQ of a genius and published many papers while still a student. At the same time, he wrote a book, which changed the

field of psychology with ideas that were considered radical then. The book was: *Interpersonal Diagnosis of Personality: A Functional Theory and Methodology for Personal Evaluation*. (1957)

The book contributed some important new ideas. “Normality” just reflects white, middle-class values. The environment and circumstances are important factors. “Abnormal” was just a healthy pro-survival adaptation. The patients must assume responsibility for their lives.

The discipline was in crises, as psychotherapy was not working. Those who got counseling were no better off than those who got none, on the whole.

At the time, Leary was thirty-five years old. His first wife committed suicide due to Leary’s unfaithfulness. He left Berkeley, remarried, and took the two children to Europe. He worked on another book in which he argued that the psychiatrist must get out into the real world and be involved with the patient. He realized that observation changed the situation.

After falling ill and seeing the healing as spiritual, Leary met a professor, David McClelland. He was offered a job at Harvard. While at the university, he met Richard Alpert. An old friend, Frank Baum, talked of magic mushrooms that could give one a psychedelic experience. R. Gordon Wasson had researched the mushroom cult back to four-thousand years. He had discovered ecstasy with a mushroom called teonanacatl (God’s Flesh).

Timothy Leary thought this might be a key for behavioral change. In the summer, he went with Alpert to Mexico to find some of these mushrooms. Timothy and his friends ate the mushrooms sitting around the swimming pool. After half an hour, they began to laugh uncontrollably. Then Leary’s mind split open. The experience altered his brain. His concept of time and space changed. Leary recalled that he saw the world with clarity and learned more about the mind in four hours than ever before. This is, of course, very much the experience called enlightenment in Eastern religions.

Leary decided that this discovery would allow him to explore the methodologies he wrote about in his book. The doctors would take the psychedelic drug with the patient. But for society, the possibilities were just too explosive. They had the possibility of releasing people from the repression of authoritarian religious dogma and accepted political ideology.

Now Leary had a new mission. The Harvard Psychedelic Research Program was set up. The active component of the magic mushrooms was psilocybin. It was available from Sandoz laboratories in Switzerland in the form of pink pills. Professors and students would take the pills together with observers and see what happened. Hundreds of students volunteered. It was found that the experience was one of broadening awareness and increased insight. There was humanistic interchange. The little pink pills were teaching the students more than their professors could. If more people could have the experience, it was thought, maybe it would end war.

The experience was nothing new, in fact. It was just that the ignorance about it was just too vast. It had been around for thousands of years, not only in India among the sadhus, but in many tribal societies. American Indian tribes used peyote in the same way. It was known in Europe and England, but here, the experience was kept among the elites. It was not to be used by the masses.

The British novelist Aldous Huxley had experimented with psychedelic substances and wrote about it in his novel *Brave New World*. He had written about it in *The Doors of Perception*. William James wrote *The Varieties of Religious Experience* in 1902 after experiments with nitrous oxide. Other such drugs were mescaline and LSD.

The researcher, R. Gordon Wasson had claimed that psilocybin had the potential for social change in society and could overturn existing scientific paradigms. There were also religious implications, namely evidence that religion was actually caused by psychoactive fungi in all corners of the globe.

Huxley came to Harvard and met Timothy Leary. For Huxley, the psychedelic substances would be

used by giving them to powerful people, such as businessmen, politicians, artists and intellectuals. They would be kept away from the population as they could threaten a stable functioning civilization.

Huxley thought that they offered a way out of war and oppression. Powerful men had to understand how to use them and the leader of the experiments had to be “respectable” members of society.

One of Leary’s friends was Allen Ginsberg, a poet of the sixties who wrote “Howl.” Ginsberg’s mother had been in the Communist Party USA. Ginsberg argued that everyone had the right to the psychedelic experience so the drug should be given to the masses. Leary would start to argue the same thing.

Leary and Richard Alpert set about to collect data after running experiments on some 200 colleagues and volunteers. To gain more scientific data, Leary went to the Massachusetts prison system and asked to give psilocybin to inmates who were about to be released. It was part of the prisoner rehabilitation program to see if the recidivism rate could be lowered.

At the time it was running at seventy percent. After receiving psilocybin, the rate dropped to only ten percent among Timothy’s inmates. It was a phenomenal success, but it was not clear if this was the result of the drug or because inmates gained a better understanding of life’s problems and were given extra support.

Not everyone liked the experimentation, however, and opposition began to arise. Another experiment was the Good Friday Miracle. At an Easter religious service, half the members of the audience were given psilocybin and half a placebo. Of those who took psilocybin, ninety percent had a religious experience. This experiment offended some people as it seemed to undermine their religious beliefs. It seemed that the experiences of the great Christian mystics could be obtained by just taking a pill.

It was in 1961 that Timothy Leary was introduced to LSD. Lysergic acid diethylamide-25 was invented in 1943 by Albert Hofmann at Sandoz Pharmaceuticals. It was derived from ergot, a rye fungus that is rich in alkaloids. Hofmann had taken

250 micrograms and experienced a wild ride on his bicycle on the way home. He called it his “problem child” because it had great potential for medical use, but got out of control when masses of young people started to use it as a recreational drug.

In the USA, the Central Intelligence Agency thought that LSD might be useful as a “truth drug.” The US carried out experiments in 1954, but found it useless after hundreds of CIA employees had taken the drug. The US military also experimented on 1500 people and called the experience “a trip.” That is where the term came from.

Further CIA programs were carried out with the drug as part of the research into chemical and biological weapons. The MK-ULTRA program gave LSD secretly to people in prisons. The CIA also operated a brothel in San Francisco where they secretly watched the behaviors of people after taking the drug. But the effects were so unpredictable that the CIA seems to have given up on it. It seems, however, that they may have used it for torture.

It was not long before LSD began to be used by famous people in Hollywood. Leary got his first LSD from Michael Hollingshead. He obtained one gram of LSD from Sandoz, which was enough for five thousand doses. When Leary took it, he found it much stronger than psilocybin.

He said it was “the most shattering experience of my life.” He understood that “everything within and around me is a creation of my own consciousness... Everyone lives in a neural cocoon of private reality.” All behavior patterns are just games that people are taught to play. There is no such thing as “normal” and “abnormal.” He realized that normal consciousness was not the ultimate reality. He had just created it himself. Or in the Indian context, the world is Maya.

These mental models that people create were called “reality tunnels” by Leary. Whatever one believes imprisons them. This explained the post-modern move away from the Enlightenment ideas of the eighteenth century which viewed reality as absolute. It was necessary for the mental world to undergo a revolution. Religion, social movements, and political

movements try to synchronize the minds of large numbers of people. This is actually an attempt to prevent them from using their own brains. Leary asked people to take control of their own brains.

Meanwhile at Harvard University, things were starting to become wilder in the Center for Personality Research. Leary’s house had become a sort of commune. The CIA and university officials were watching and becoming more concerned. The influence of Leary and Richard Alpert was spreading first to Hollywood and also to Washington, DC. This was likely where it was needed the most.

An acquaintance of Leary was Mary Pinchot Meyer. Her husband, Cord Meyer, was a CIA agent in covert operations. Leary trained her to guide people on LSD trips. She was also believed to be a mistress of President John F. Kennedy and it is believed that President Kennedy took LSD while in the White House. She was murdered in 1964.

These insights that LSD revealed to Leary were actually very old ideas. The illusions of the world are the shadows on the cave wall in The Republic of Plato. The world is just illusion, or Maya. One might discover this through years of meditation or years of prayer to God in the case of Christian saints seeking mystical experiences. Sadhus smoke gung to focus their mind. But LSD was a sort of short-cut to these insights.

There was no need to spend years in meditation. Just take the drug and get the same result in about half an hour. The experimenters realized that the experience was an old one in India. But not just India, it had been used in the West too, but the truth had remained largely hidden and dismissed as it was not seen as scientific. It did not fit the academic scientific paradigm.

There were an infinite number of realities or reality tunnels that one could use to reprogram their brain. LSD now seemed to be the key to this reprogramming operation. But academics saw it as unscientific. Where was the hard data? This was their question. Leary began to be seen as a flake and it did not help when Swami Vishnudevananda performed a head stand on the conference table of

the Harvard Center, dressed only in his loincloth.

Those who took LSD also discovered that it heightened the sexual experience. The hedonism, sexual liberation, and intellectual expansion increased awareness and those who took trips somehow came across as wiser. Some students started to drop out to study Yoga on the Ganges, which did not please the parents who paid thousands of dollars for them to attend the university.

The shit was about to hit the fan, as they say. As often happens in academia, a committee was about to emerge which came under the rubric of “the get-Leary committee.” Some faculty began to complain about Leary and said that the work of the personality center did not have scientific validity.

Leary was also accused of corrupting students. He had become a modern-day Socrates. Richard Alpert was fired from Harvard. Higgs says that Leary was fired too, but this is not certain. In any event, when Alpert left Harvard, Leary also left.

The two went private and formed an organization called IF-IF, the International Federation for International Freedom and began to publish a journal. They had help from rich friends and opened up a center at Millbrook in New York State. The large house was owned by two grandchildren of the founder of Gulf Oil.

Leary and Alpert set up a commune in the place. In LSD sessions, Leary said, set and setting was important for the experience of getting a “glimpse of utopia.” Set meant being in a good frame of mind. Setting meant being in a harmonious location with trusted friends.

LSD became illegal in 1966 but a large amount was being produced underground. It was taken by at least seven million Americans. Leary called it “deprogramming oneself.” Leary went to India and lived for four months near Almora in the Kumaon Hills. Alpert also went to India and eventually became Baba Ramdas. He came back to the US to teach Yoga to Americans.

Leary, however, was never sold on established religion and told people to establish their own

religion. Leary founded the League of Spiritual Discovery taking the name from Hermann Hesse’s *Journey to the East*. For Leary, the Divine was a product of the mind. There was no “higher power” external to the nervous system. “God” is the mind and “sentient chaos.”

One of Leary’s friends began his own religion, called the Neo-American Church with the motto: “Victory over Horseshit.” One can say “Amen” to that. Millbrook was declared to be a monastery. At this stage Leary advanced the principle that “Thou shalt not alter the consciousness of thy fellow man.” This seemed to change later, however. At the center of the movement, Leary came to be called a guru. He said the revolution was entirely spiritual and that LSD was a religious sacrament. Leary was also called the “High Priest.”

For some it seemed to be just thumbing one’s nose at square middle-class society and having a lot of fun. But someone had to be paying the bill, of course. Perhaps it was only the relatively affluent kids from middle class families who had the luxury to goof off for a number of years before settling down to make a living.

I remember that in the sixties, my struggle was not against the establishment but just getting through the university. If I did not make it, there was nothing to fall back on. In the summers I had to raise crops on the farm to have some money to pay my way through the university. While the hippies were seeking enlightenment, I was plowing corn.

The looming threat from the establishment was the Vietnam War that could get one killed. But students in my situation did not have any money to travel across the country and have fun experiences with drugs. I did not have the luxury of spending time to find enlightenment. This was probably true for most. Because of that, I never experimented with drugs.

The fun aspect of it was seen in the “Merry Pranksters” and Ken Kesey, who wrote the book *One Flew Over the Cuckoo’s Nest*, after taking LSD in a secret CIA experiment at Stanford University. Kesey and others bought an old bus and drove across America taking LSD and making

fun of square Americans they met along the way.

Bringing the spiritual revolution to America was not as easy as Leary imagined, as it turned out. Just because the blinders fell from his eyes, did not mean that the institutional structures of society were about to collapse. The old society fought back. The US authorities moved against the drug culture. In particular, they were out to get Leary. Once they did, they would try to put him away forever.

The District Attorney in New York was G. Gordon Liddy. He raided Millbrook with his men. Leary knew the raid was coming, so they were mostly clean, but Liddy got the commune closed down and went on to the White House to carry out the Watergate burglary for President Richard Nixon.

Fake stories were made up and published about the dangers of drugs in the press. It was said that it damaged hormones. This was pure fiction. Leary argued that LSD is “non-toxic, non-addictive, and anti-narcotic.” Nevertheless, Congress passed a law to make it illegal in 1966.

Leary kept telling people to “turn on, tune in and drop out.” By this he meant to drop out from the social norms of society. But without a job, most people could not even pay their rent.

When Richard Nixon was elected President in 1968, he started to wage a war against Leary and the free-love, anti-war hippies. Nixon was paranoid and thought the Communists were trying to destroy America with drugs. Leary won a case against his marijuana conviction in the US Supreme Court and announced that he would run for Governor of California. He said there was no excuse for the people of California not to be happy and smiling if they followed the movement. John Lennon wrote the song “Come Together” for Leary’s campaign, but before the election could happen, he found himself in prison in 1970.

Leary’s political ideas came across as extreme libertarianism. He called his party FERVOR: Free Enterprise, Reward, Virtue and Order Party. There would be no taxes and a free market. Schools and prisons would be privatized and run for profit. It sounds quite naïve. Well, at least the last two have

come true.

Now busted again, Leary was refused bail. At the trial, the judge called him an “insidious menace” and the “most dangerous man in America.” America was out to burn Leary at the stake, after a fashion. It was the old inquisition once again. Leary smiled through it all as his years of prison sentencing built up. The heavy sentences were obviously political. He had preached expanded awareness and now said that it was his duty to escape. But in the end, “you can’t outrun the long arm of the law.”

In 1970, after seven months, his wife Rosemary was able to arrange it. The radical group, the Weather Underground, was paid twenty-five thousand dollars to hide Leary and get him out of the country, once he escaped. One member of the group, Bernadine Dohrn declared war on the United States. They were inspired by Marx, Che Guevara and psychedelic drugs.

Being in a low security prison, Leary was able to pull off the miracle and escape. The Weathermen hid him and helped him make it onto a flight to Paris and later Algeria. In Algiers, Leary and Rosemary linked up with Eldridge Cleaver who was a member of the radical Black Panther Party. The Algerian Government recognized Cleaver as the US Ambassador.

Leary declared, along with the Panthers, that the US Government had to be overthrown. Now it seemed that Leary had changed from being a peacenik to wanting to use force and militancy against the USA. It was the purist lunacy. He made the statement that “every policeman is an armed, fascist, bully murderer.”

The panthers, however, did not like drugs and hippies. They imprisoned Leary and his wife, in an attempt to get money from them. But Leary was able to trick them and escape to Switzerland. Here he was protected by a wealthy arms dealer. The US application for extradition of Leary was rejected by the Swiss and he stayed, enjoying his life in exile for a time and having a luxurious life with famous people from around the world.

Leary worked out his model of the human brain outlining the seven levels of consciousness. Level one was the basic survival circuit. Level two was the power level. Above that was the third level of social awareness and politics. The fourth level was the sexual circuit. These were the levels normally used by one living a normal life.

The fifth level was the hedonic circuit. This was pure pleasure that could be activated by cannabis. The sixth level is super-awareness, the realization that we are all one and this could be reached with the help of LSD. The seventh was the neurogenetic level that transcends space and time. These are the pure forms of Plato and Jung's "collective unconscious."

From Europe, Leary was persuaded to go to Kabul by a friend. From there he planned to travel overland to India. But the US arranged with the Afghans to arrest Leary in Kabul and put him on a Pan Am flight back to California. Nixon was out to get him. His friend was probably secretly working for the US Government.

Back in the US, Leary was tried for his escape and argued that he was not responsible because he was someone else when he escaped. This defense carried no weight with the court. The judge added another five years to his sentence and sent him to Folsom Prison. In solitary, Leary wrote another book on the back of legal briefs and smuggled it out of prison. At Folsom, he was right next door to the famous murderer Charles Manson.

In prison again, Leary constructed his Starseed Theory. The idea originally came from the British mathematician, Lord Kelvin. The idea was that the seeds of life on earth came from outer space. These seeds were nucleotide templates that evolved into nervous systems. They could switch onto higher levels.

When a comet was approaching the earth, Leary began to think that it was coming to take him out of prison. He would be leaving the planet and a "New Age" of spiritual awakening would take place. The Age of Aquarius would be dawning to lead the world to peace and enlightenment. It never happened, of course.

Faced with something like seventy years of prison sentences, there was only one way that Leary was ever going to see the light of day outside of prison. That was to turn state's evidence. If he would sing for the officials they would let him out. It shows the power of the state to destroy the most creative people in society and the US authorities were about to destroy Leary and his reputation for good. No matter what he did, they were going to destroy him.

Leary agreed to the deal to provide information to the Government, but managed to get word out to the Weatherman that he was going to talk to the Feds. For most, this was the end of Leary's popularity and his reputation. He had joined with the enemy of those who wanted to be free. He had turned against his friends. They could never trust him again.

By the mid-seventies the hippie movement in America was dead. The Punk Movement that took over was of young kids who cared nothing about enlightenment. They just wanted to sniff glue and take cocaine in a mindless buzz. They wanted to kill all the hippies. By the eighties, the materialism of the Ronald Reagan era was taking over America.

The historical dialectic had swung sharply back to the right. But American society had nevertheless been changed by the mass numbers of individuals who had psychedelic experiences. Just how this affected society is not often realized. It brought in the PC, the personal computer.

Both Bill Gates and Steve Jobs took LSD. It led to the discovery of chaos theory in mathematics. Francis Crick invented DNA while on an LSD trip. Several other Nobel Prize winners made their discoveries as a result of LSD and Post-Modernism came about as a result of DNA. There was a paradigm change in theory.

Relativism became widespread. Identity politics arose along with the gay movement. The eighteenth century rationalist models were increasingly questioned. Where LSD was used the most in the US, these states became more open and more democratic. They were less politically conservative and less likely to support US imperialism.

When Timothy Leary died in 1996, he had made a quite significant impact on American society and culture. Everyone who loves freedom should still get a big charge out of seeing Tim Leary telling the corporate chairmen and the generals to go to hell. Give peace a chance. We will not be a part of your wars. A portion of Leary's ashes were launched into outer space.

America today may be a more chaotic and fragmented society as a result of all the minds that

were expanded on LSD in the sixties but in my view it was a great and necessary development. Unfortunately, the sixties' struggle for freedom had to be crushed brutally as it was a dangerous threat to corporate capitalism and the American Empire itself. In a serious empire, it is not possible to give peace a chance. It is something for which the people always have to struggle.

Eddie J. Girdner is author of Global Political Economy (Denver, USA: Outskirts Press)



Democratic Aspects of Kebang System of the Misings

Dr. Nabo Kumar Pegu*

[When we are told "If the average man had his way there would probably never have been a state," one thing becomes clear that out of necessities only we put up together and evolve certain custom(s) to bind ourselves into a group for living together with our common purposes. This is how the primitive society evolved the political system necessary and suitable at that time.]

Then it appears that at the initial stage of human society there was no such thing called 'polity' and the latter came along with growth of the society in its particular stage.

Such stage in different societies has been pointed out by Will Durant when he writes "In the simplest societies there is hardly any government. Primitive hunters tend to accept regulation only when they join the hunting pack and prepare for action. The *Bushmen* usually 'live in solitary families; the *Pigmies* of Africa and the simplest natives of Australia admit only temporarily of political organizations and then scatter away to their family groups; the *Tasmanians* had no chiefs, no laws, no regular government," and so on.

From this above quotation can be drawn a few factors which are responsible for the growth of polity. These factors are (a) security, (b) better performance, (c) imitation etc. Man, during his period of living in nature, had to go for hunting for subsistence at least. While in the jungle he found

himself beset not only by predatory animals like lion, tiger, elephant, bear etc. but also by spirits. To protect himself he had to take the help of others. So, he had developed the habit of going to the jungle in a group. Their going in a group alone would not help much if they had not learned the art of helping each other at a time of need through co-operation and co-ordination. The 'co-operation and co-ordination', later on stood as certain rules or tradition.

Scholars are of the opinion that this sort of traditions had been built up not only out of necessity but also through imitation of some other animals in nature. They must have seen the wild elephants, buffalos, deer, monkey, chimpanzees and others moving in the jungles in pack. Man must have also observed among baboons, chimpanzees, elephants and others that whenever there is an attack from some predator like a tiger or a lion or other some leader like strong male comes forward to counter attack the predator, and he is followed by other young brethren.

Other than in normal time when there is no chance of being attacked by any predatory creature, though man behaved as an individual animal, as it has been

* Silapathar College, Silapathar (Assam)
(nabokrpegu@gmail.com)

noticed, in time of necessity he began to follow the rules dictated by the leader. Thus came up, in all probability, the importance of a chieftain in the primitive society.

Depending on the situation of lives in the jungle the people of Arunachal Pradesh were frequently victimized by not only human enemies but also by wild animals, spiritual beings like ghosts and spirits causing disease and epidemics; and as such they began to give shape to certain customs and traditions of administering themselves.

In this leadership, in most cases except with a *Naga* group of tribes, the *Singphos* and the *Khamtis*, they evolved a sort of democratic system. The exceptional tribes might have learnt in certain different situations in Burma from which only they migrated to Arunachal Pradesh, after giving shape for chieftainship system.

So far as the *Mising* polity is concerned one should go to the seventh century Tibet where, in the meantime, chieftainship had already evolved into monarchy. The *Misings* together with the tribes of the *Lopa* and *Monpa* groups seemed not to have relished monarchy imposed on them depriving them of their faith in shamanistic animism. That was one reason of leaving their motherland, Tibet, to an unknown land full of high mountains, deep gorges, turbulent rivers, hostile nature and so on.

Under such circumstances the tribes had almost to go back to the primitive stage without any light of civilization - neither from the north nor from the south; neither from the east nor from the west. One peculiar aspect to be noted with interest in that mountain country, now called Arunachal Pradesh, through vicissitudes of being called Frontier, Frontier Agency, North-East Frontier Agency etc., was a *terra incognita* from immemorial time in general and from seventh century in particular, up to the tenth year of the twentieth century.

From the expression - *terra incognita*, one may have the cultural picture of the tribes that escaped the wrath of Tibetan monarchy, on ground of religion, to enter into this very tropical forest region.

Their life-styles in this mountain region may draw

special attention of the scholars. Though they had to cross the Tibetan border to escape the wrath of Tibetan monarchy and that monarchy in itself was not an old one of civilized government. It was, in fact, the insistence of Weng Cheng, the Chinese queen of the Tibetan monarch, Tsrong-Tsan Gampo that the king had to introduce Buddhism as the state religion of Tibet.

Again, Tsrong Tsan Gampo was the first powerful king, after a series of kings of feudal nature ruling over different regions of that vast country, who consolidated the whole of Tibet. As such it could not, perhaps, be expected that Tibet, prior to introduction of Buddhism there, could attain certain standard of civilization so far as administrative pattern of the society is concerned.

From such a primitive society ruled by the chieftains, having an animistic shamanist culture, came the present tribes of Arunachal Pradesh, especially those of the northern bank of the Brahmaputra, including the *Misings*. In all probability, they plunged again into the hunting stage of human civilization on two grounds: (a) absence of agriculture providing them their mainstay (b) abundant forest regions, with rivers, providing natural food-stuff to scanty population.

Community hunting was a natural tradition with the society supplying them fish and meat for drying and preserving for future consumption.

By the eighth century the *Misings* seem to have plunged into a sort of primitivism in which one can hardly presume a developed form of polity permitting some chief to rule and administer the people. As seen earlier, they seemed to have lived a stateless life based on family and then on clans.

By the twelfth/thirteenth century when they are presumed to have come down from the mountains to the plains of the Brahmaputra Valley, they appear to have evolved some sort of a democratic administrative system based on the necessity of life. The society was, by then, an animistic shamanist one, the priest always having the upper hand in the society. Very often he has to play an important role in administering the society; and it is interesting to know that many such priests, (*Miri* in *Adi* language), were *gams* of the village council, *Kebang* in *Adi* language.

As religion plays a significant role in state formation, it punctuated into the administrative system. It is, perhaps, because of such mental make-up of the people, the *Dolung Kebang* (village council) took the democratic base in the tribes of Arunachal on the right bank of the *Siang*; the *Mising Kebang*, received as legacy of the common institute -*Adi Kebang* was also democratic in nature.

Even if the sixty percent of the *Adi (Abor) Kebang* is absorbed by *Mising Kebang* then one should tend to say what Dr. Kuli has stated of the truncated *Mising Kebang* of last part of the twentieth century is not the *Kebang* of the *Misings* as in vogue from the 13th century, the period of *Mising* migration to the Assam plains.

The *Adi Kebang* functions like a law court in trying a dispute between two parties. The *Kebang Abu* moves the case from the deposition of the plaintiff and the accused and the witnesses, if any; it is followed by arguments for and against the plaintiff's case. Thus the case is open for arguments for and against supplied by some experts, called *Abe speaker*, (expert orator on history, customs and traditions of the tribe with reference to particular events in the past).

When an *Abe* speaker argues he uses an ornamental language which is different from the language used for day-to-day purpose. This separate language originated in Tibet during the age of shamanistic animism; and the language was meant for communicating with divinity. It has been pointed out by the author on *Religion and Religious Festivals of the Misings* that this language was used by the shamans as a link between divinity and man; so that language is called the divine language.

In *Kebang* also the divine interference is brought in through the use of this language. In administrative matters also divine sanction is thus sought through the use of that sacred language. The speakers in a *Dolung Kebang* usually use this language giving reference to previous cases as in a law court provided by the lawyers for the consumption of the judge for his arriving at a conclusion as judgment.

In this argument even a *Musup-ko*, the dwellers in the *Musup*, has the right to put forward his argument

of the *Kebang* deliberation, though some inhibition crops up for those who have not acquired mastery in that secret language.

It may be doubted whether the *Misings* use that sacred language- *Gomku* - or not in the *Kebang* deliberation. That the *Mising Kebang Abu* also used '*Gomku*' in the past, they also, if they followed the procedures of an *Adi Kebang*, might have used that language. Even if the younger people do not know that language, they have the right to speak in the deliberation.

To our belief the *Mising Myrang Kos* spoke in the *Kebang* in the past for the council to come to a conclusion. According to that conclusion or decree reward or punishment was awarded to the disputing parties. In that case it appears that Dr. Kuli, Dr. Pegu and Mr. Mipun have expressed their views on the basis of recent *Kebang* procedures without much reference to their ancient *Kebang* system, i.e. *Kebang* of even 19th century *Mising* society.

In fact, it seems that in the *Adi Kebang* all the people except the two major exceptions, (women and slaves) were involved. In fact, the power of the *Kebang* never allowed to be exercised by any leader, individual or collective. It always rests with the whole *Kebang*; they (he) are only to guide the deliberation in its sessions, And the procedure for their arriving at a conclusion to meet the end of justice to all or a national decision for social development is something like that of a law court.

In a law court any sort of dispute is tried through debates and arguments put forward by the lawyers engaged by the two parties- the plaintiff and the accused. So in an *Adi Kebang* session in a *Musup* in which all the adult members present are allowed to speak for or against the plaintiff or the accused, so that the *Kebang* could arrive at a decision announced by the *Kebang Abu*.

The *Adi* method of arriving at a decision is a kind of catechism which ultimately leads to a consensus. When these comments are pitted against what Pegu and Mipun, and even Kuli, have said of a *Mising Kebang* one may even arrive at either an incorrect decision or a vague picture of the latter.

One may even say that these authors' statements are not based on well studied sources. Rather the sources are vague guesswork rather than practical experiences of a traditional *Mising Kebang* in session that might have undergone basic changes through the Assam Frontier Regulation (Administration of Justice) 1945, and introduction of Panchayati Raj system after Indian independence and so on.

We get, perhaps, a partial picture of the *Mising Dolung Kebang* from the pen of Willcox, writing in 1825-26: "These singular people (the *Adis*) acknowledge no other authority but that of the *Raj* (from Assamese word *raij*, meaning the people) or people generally who make harangue in the councils assembled in the *Murang* where everyone has an equal vote." It is interesting to note the use of two words- *Raj* and *Murang*, which he, in all probability, came to know from some *Mising Kotoky*.

During those days; prior to 1873, the year of the introduction of Inner Line system, the British touring officers used to take with them some *Mising Kotokies* for interpretation of what he heard from the *Adis* and to interpret what he said to the villagers. Now, since the *Kebang* in session, in question, was at *Mebo* the *Mising Kotoky* might have used *Murang* (*Mising* Community Hall), instead of *Adi Musup*. and *Raj* [actually *raij* (people)] have some significance.

For, similar practice was still there among the *Misings* of the Murkongselek region. Since then, however, things have undergone vast changes during one and a half centuries. Since there is no proper picture of traditional *Mising Kebang* it is probable that the above *Mising* scholars simply presumed things without proper study.

What one may say about *Mising Kebang* is that it is a democratic institution so far as its structure is concerned - the *Kebang Abo*, generally the senior *Gam* of the village as its head for conducting the deliberation among the members of the *Kebang* presenting their own opinions based on the customary laws or statutes. The decision, however, is delivered by the *Kebang Abo*, the head *Gam*, and that is final. In spite of these, the *Mising Kebang*

is a partially democratic institution as the institution of the Greek city states.

One more thing, in this respect, is that it attained sovereignty if it covered the whole tribe within its preview. To drive home the point, one is to have the correct picture of the tribes of Arunachal Pradesh since the point of their being covered by the British Indian Administrative machinery, since 1873 onward.

It has already been noticed that the vast mountain mass now called Arunachal was a *terra incognita* for centuries. Very thinly populated this region accommodated sometimes some people almost like nature society having no contact with the outside world for centuries. In such situation they had either to go back to the primitive stage of an aboriginal society to begin everything from the scrap or to continue with the earlier customs and traditions with occasional changes (reformatations) as demanded by situation.

The *Misings* had also to live through such situations for some five centuries before their coming down to the Assam plains from 12th century onward. From the use of some vocabulary like *Gam*, *Migom* etc, the *Misings*, together with the other *Lopas*, seem to have continued with the customs and tradition formulated in Tibet itself. The Tibetan term *Gam* means leader as one finds in *Gam-Po* meaning king-*Gam* meaning leader and *Po* meaning people; *Ami*, meaning man and *Gang*, *Gom* meaning strong, courageous and *Migom* means a man of high status.

To that basic tradition they might have added some new rules and customs as demanded by situation. Living in small groups separated from other groups for long time led to some variations in their customs and traditions which are called the local variations. The situation was such that one group of people began to suspect the other group as enemy whenever they confronted in the course of their movement.

The original meaning of the term *Kebang* is intelligent, wise man. So, originally *kebang* was a body of wise and intelligent people to look after the security, well-being and development of the tribal community. Gradually, this group of people began

to take help of other people also for strength and execution. There lies the reason of its development as a democratic institution, if woman and *Pagbo* were eliminated as too stupid; as it was in Tibet also.

It is again that situation the clan-based tribes of Arunachal Pradesh attained a kind of village-state attaining sovereignty comparable with the Greek city state sovereignty. The feature of village state sovereignty appears responsible for maximum power to the *Kebang*.

It would now be imperative to study the powers and functions of a *Kebang*. A *Mising Kebang* has ('had' till they were in the mountains almost as a sovereign power) the following powers and functions. (a) Legislative (b) Judiciary and (c) Executive.

Depending on the demands of the situation the *Kebang* could legislate on any aspect of their social life; and such law cannot be challenged by anybody; they executed the *Kebang* decision without waiting for a moment. In a sense the *Kebang* has got the administrative power for development activities like drawing an aqueduct from the water source to a convenient central point of the village, erecting community fencing for protecting the crops of the common agricultural area, constructing the *Murang* (unmarried young boys' dormitory) etc.

So, the *Murang* has a significant role to play in a *Mising* village. Its importance cannot simply be exaggerated. While still in the mountains, the *Murang* was everything - a guard post at night during which the unmarried boys used to guard the village from any possible attack from some enemy; at day time it is the immobile old men's club who sit and gossip telling the stories of life's experiences while still working on basketry and guarding the village against any out-break of fire in some house in which the fire keeps on burning twenty-four hours to expel mosquitoes and flies, and to keep the fire alive in view of non availability of match boxes (they used to lit fire with flint and cotton only).

It was the law-court in which the *Kebang* sat whenever there was some dispute between two or more families or clans, it is an administrative office

in which the *Kebang* sit for deciding on the development activities; it is the temple in which they propitiate the God of hunting whenever they decide to go for community hunting praying for God and occasionally on return from hunting too when a big prey was killed, and then celebrating *Ali-Aye-Ligang* festival, *Porag* etc.

The *Misings'* cognate tribe, the *Adis* especially the *Minyongs*, the *Padams* and the *Shimongs* had and in the interior villages still have a girl's dormitory called *Raseng*, to which the *Musup*-equivalent to *Mising Murang*, young boys visit the girls for pre-marital sex and other enjoyment. It is doubtful whether the *Misings* also had similar girls' dormitory. A number of old people cannot remember of such a social institution, but it is not very difficult to surmise that they might have had for the same purpose.

The possibility could be studied from the situation at *Pasighat* since the sixties of the last century. Coming into contact with the Indian non-tribal people the *Adis* there, began to consider the *Raseng* system a bad social institution for pre-marital sex, and so they began to make it a secret first and then abolished totally.

Any scholar going to study the *Adis* at *Pasighat* will have to come back blank about the existence of *Raseng*. In case of some scholars, however, who had been to the interior villages like *Milang*, *Damro*, *Adi Pasi* etc. had been to *Raseng* on different occasions that they are 100 percent convinced that *Raseng* is a reality; whereas a scholar visiting *Pasighat* may get nothing of it and in his writing he will not mention of such a thing.

Later on, of course, *Adi* scholars like Oshong Ering, Talom Gao (died since) wrote some articles in the local magazines. Drawing an analogy of situation at *Pasighat* from the sixties of the last century with that of the *Mising* since the thirteenth /fourteenth century, (the probable period of their migration to the Assam plains) one may surmise a similar social institution for free pre-marital sex.

There is even an echo of that institution in the *Mising Mimvir- Yame*, a *Mising* social institution for free

movement of young boys and girls performing social welfare programme and even participating in the *Kebang* especially in matrimonial disputes of a couple of lovers.

Here is the point of the *Mising Kebang* deviating from the *Adi Kebang*. As it has already been noticed there is no place for woman in any kind of deliberations in an *Adi Kebang* except in distributing *Apong* among the members of the *Kebang*: but in a *Mising Kebang* in session to settle a dispute as to the objection of the groom; or of the bride's parents the *Mising* girls attending as the members of the *Mimvir-Yame* have got the right to plead for the marriage between the lovers which is about to be dissolved because of objection from either side of the bride or of the groom. Otherwise, there is no place of woman in the *Mising Kebang*.

This is the position of the *Mising Kebang* exercising the supreme power over its subject citizen - the members of the village- till the promulgation of the Assam Frontier Regulation (Administration of Justice) 1945, which imposed, theoretically at least, restriction on unlimited power of the *Kebang* in imposing penalty or fine and even death sentence on the accused. The Regulation, however restricted the *Kebang* from imposing fine more than Rs. 50/- or passing a life sentence on the perpetrator of the traditional rules and customs.

One example one gets on record is the *kebang* decree on lives of the hero and the heroine of Rajani Kanto Bordoloi's novel in Assamese - *Miri Jiyari* in which they were both found guilty of violating the social moral code in their love for each other; and in the *Kebang* trial they were sentenced to death. And in exercise of the executive power of the *Kebang* the lovers were bound hands and feet, and then were thrown into the turbulent river.

That was the sovereign power of the *Kebang* with no authority above it to restrict in decreeing unlimited punishment and its execution without interference from any other authority. With the advancement of the society, especially after their coming into contact with the Assamese society, and then coming under the *Ahom* rule, followed by British Administration, the rigidity of customs and rules of a *Mising Kebang*

gradually got mellowed down.

And now the judicial and administrative powers of the *Kebang* have been relegated to the background whereas the Indian Administration has practically replaced the *kebang* rule by Indian law codes etc.

By *Kebang* it is generally meant the *Dolung Kebang* (village council) whose authority is generally confined to a particular village only. In case a particular village has not attained sovereignty it may have social and other relations with the neighboring *Mising* village or villages. In case of some disputes involving two or more villages the *Dolung Kebang* does not have authority for settling such dispute.

The *Misings* have a wider *Kebang* called *Bane Kebang* comprising all the groups of *Mising* villages within easy reach. In other words, a *Bane Kebang* may consist of a group of *Mising* villages inhabited by one or more *Mising* clans. Similar group or groups of villages may be there of the *Mising* people across an un-fordable river or a mountain or at a long distance. Such villages or group of villages shall not come within the jurisdiction of another *bane Kebang*.

Apart from settling the disputes between two or more village, under a particular *Bane Kebang*, the chief functions are mostly developmental activities like road construction of inter-village interest, language and culture of the tribe. One characteristic of a *Kebang* seems to have been shunned by the *Misings* after their arrival in the Assam plains and that is the supreme body of the tribe enjoying sovereignty of a state.

It has already been noticed that, while still in the mountains of present Arunachal Pradesh, all the tribes were individually independent with complete sovereignty, due to absence of any higher authority to rule over them - neither from Assam's side because of weak government in Assam during the *Ahom* rule, and of non-interference policy of British Indian Government since 1826 till 1914 the year of founding of the Mc Mahon Line; nor from Tibet's side considering the peonies in the mountain mass as too savage to be ruled by any civilized government.

Hence was this region, comprising more or less the

present Arunachal Pradesh known as the *Ajanti Mulak* in Assamese and *terra incognita* in European language, as has already been pointed out? As a sovereign state comprising the total tribe there should have been a supreme body to defend their territory inhabited by that particular tribe.

What Dr. Kuli speaks of the ‘Supreme authority’ of a village *Kebang* is the defending authority from any attack of another *Mising* clan or a village. Similarly a *Bane Kebang* comprising a group of *Mising* villages within easy reach, have some authority in respect of developmental activities and settling inter-village disputes only, but not of defence when a different tribe like the *Mishimis* or the *Tagins* make an attack on a *Mising* village of a particular *Bane Kebang*.

With them the sovereignty rested on defence from attack from another tribe and to some extent in maintaining foreign relation. The question of currency was not at all there for all kinds of exchanges were conducted through barter only. The *Adis*, cognate to the *Mising*, had a supreme body covering all the villages of the tribe, if not separated from the main tribe by an inaccessible distance or barrier, for defence and foreign relation only; and it was called *Bogum Bokang*.

For the *Adis* the *Bogum Bokang* was situated at *Bomdo Zambo* area towards the north-west of Yinkiyong. It became nonfunctional when, after McMahan Line was introduced in this mountain region by the British Indian Administration, followed by the Administration of Independent India. After the *Mising* migration from the mountains to Assam plains they came more or less under the *Ahom* Administration, then British Indian Administration and ultimately Indian Administration.

During this long period of some seven-eight centuries, the *Bogum Bokang* like institutions might have withered into forgetfulness because of non-utility of such a political institution. Even *Bane Kebang* appears to have lost its teeth because of non-utility during British period till very recent time. It appears to have been revived among the *Misings* by the first quarter of the twentieth century.

In 1924, some educated *Mising* youths decided in a conference to form a semi-political organization

of the entire *Mising* people in order to bring the entire community into one platform and to retain its distinctive identity and to put themselves in the progressive trend. This organization was later converted to *Mising Banke Kebang* in 1953.

Thus, it revived in the wake of revivalism from sixties of the last century with all verve and virility when autonomy demand came to the fore. On the other hand, the most powerful (in the language of Dr. Kuli and Dr. Pegu) *Dolung Kebang* began to lose almost all its teeth with the promulgation of the Panchayati Raj Act bringing in a new era; the sanctity of a *Dolung Kebang* with women kept at a distance except the young girls of the *Mimvir-Yame*, began to give way to various bodies - cultural, administrative and others with ladies either as chairperson or as vocal members etc.

In addition, there are women bodies to tackle their own issues without any interference from the male counterpart. That is the *Takam Mising Mime Kebang* comprising all the *Mising* women of the state.

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Issues and Strategies in Digital Preservation

V. Harineeswaran*

[‘Digital preservation’ or ‘digital archiving’ essentially aims at taking steps to ensure the longevity of electronic documents. It applies to the documents that are either “born digital”, stored on-line or available on CD.RROM, diskettes and other physical carriers) and for the product converted from analog-to-digital, if long –term access is intended.]

Digital preservation policies document an organization’s commitment to preserve digital content for future use; specify file formats to be preserved and the level of preservation to be provided; and ensure compliance with standards and best practices for responsible stewardship of digital information.

For the purpose of clarity, it is worth establishing some basic distinctions between common terms which will occur in this article. Even among experts there are misunderstandings based on subtle differences in the way terms are defined. The current lack of accepted terminology in this area makes progress more difficult. Digital Preservation involves various stakeholders from different communities; thus clarity of language is critical. For librarians, archivists and technologists a term like “archive” or “metadata” can mean very different things.

Digital preservation is a process by which data is preserved in the digital format for ensuring the usability, durability and intellectual integrity of the information contained therein. A more precise definition is: the storage, maintenance, and accessibility of a digital object over the long term, usually as a consequence of applying one or more digital preservation strategies.

These strategies may include technology

preservation, technology emulation or data migration, all of which are discussed in more details. According to Hendley, at a basic level, all digital preservation strategies involve the following tasks:

- 3 Preserving the digital medium that hold the digital information by storing it in the correct environment and following agreed storage and handling procedures;
- 3 Copying the digital information onto newer, fresher media before the old media deteriorates past the point where the digital information can be read or becomes so obsolete that we can no longer find a storage device to read it on
- 3 Preserving the integrity of the digital information during the copying process. Likewise, Jeff Rothenberg suggests that all digital objects have a set of “core digital attributes” which must be retained through any preservation process. For Rothenberg these attributes include the ability to be
- 3 Copied perfectly;
- 3 Accessed without geographic restraint;
- 3 Disseminated at virtually no incremental cost (given the appropriate technical infrastructure);

* Librarian & Ph.D Scholar, Vinayaga College of Education, Chennai. (harinees.lis@gmail.com)

- 3 Machine –readable so that they can be accessed, searched and processed by automated mechanisms.

Digital preservation often refers to different things. For example, preservation digitization (sometimes referred to as digital preservation) is a means of reformatting rare or fragile materials to digital form as part of a preservation strategy. In the early 1990s a number of high profile projects were funded in the US and focused on what was termed “digital preservation” at the time but is perhaps more accurately described as preservation digitization.

Issues

The fundamental issues of preserving electronic documents or “digital objects” stems from the fact that the object unlike non-digital formats is accessible only by using combinations of computer hardware and software. Market competition means that this hardware and software can become obsolete within a short period. Ensuring ongoing access, therefore, calls for currency with technology changes and moving digital objects from obsolete to current file formats, storage media, operating systems and so on. Numbers of other technical, social and legal issues add to the difficulty of the task and these include, *inter alia*, include:

- 3 The Increasing complexity of digital objects (incorporating text, images , audio, video in various formats) and their increasing software dependence (e.g. storage in databases);
- 3 The rapidly increasing number of digital objects and proliferation of document standards and formats;
- 3 The lack of planning to incorporate preservation needs in systems and lack of availability of off-the shelf products supporting preservation needs;

- 3 The lack of consideration of long-term access requirements when creating digital products;
- 3 The absence of widely-accepted standards which will assure access overtime;
- 3 Copyright/intellectual property rights that may interfere with the ability to preserve digital objects through systematic copying;
- 3 Unstable storage media (e.g.. diskettes whose life span is limited ; and
- 3 A lack of technical expertise in collection managers and preservation experts; etc.

Preservation Fundamentals

Archival appraisal (or, alternatively selection) refers to the process of identifying records and other materials to be preserved by determining their permanent value. Several factors are usually considered when making this decision. It is a difficult and critical process because the remaining selected records will shape researchers’ understanding of the body of records, or fonds.

Appraisal is identified as A4.2 within the Chain of Preservation (COP) model created by the Inter PARES 2 Project. Archival appraisal is not the same as monetary appraisal, which determines fair market value.

Archival appraisal may be performed once or at the various stages of acquisition and processing. Macro appraisal, a functional analysis of records at a high level, may be performed even before the records have been acquired to determine which records to acquire. More detailed, iterative appraisal may be performed while the records are being processed.

Types of Preservation

Integrity

Data integrity provides the cornerstone of digital preservation, representing the intent to “ensure data is recorded exactly as intended [...] and upon later retrieval, ensure the data is the same as it was when it was originally recorded.” Unintentional changes to data are to be avoided, and responsible strategies put in place to detect unintentional changes and react as appropriately determined.

However, digital preservation efforts may necessitate modifications to content or metadata through responsibly-developed procedures and by well-documented policies. Organizations or individuals may choose to retain original, integrity-checked versions of content and/or modified versions with appropriate preservation metadata. Data integrity practices also apply to modified versions, as their state of capture must be maintained and resistant to unintentional modifications.

Fixity

File fixity is the property of a digital file being fixed, or unchanged. File fixity checking is the process of validating that a file has not changed or been altered from a previous state. This effort is often enabled by the creation, validation, and management of checksum

While checksums are the primary mechanism for monitoring fixity at the individual file level, an important additional consideration for monitoring fixity is file attendance. Whereas checksums identify if a file has changed, file attendance identifies if a file in a designated collection is newly created, deleted, or moved. Tracking and reporting on file attendance is a fundamental component of digital collection management and fixity.

Characterization

Characterization of digital materials is the identification and description of what a file is and of its defining technical characteristics often captured

by technical metadata, which records its technical attributes like creation or production environment.

Sustainability

Digital sustainability encompasses a range of issues and concerns that contribute to the longevity of digital information. Unlike traditional, temporary strategies, and more permanent solutions, digital sustainability implies a more active and continuous process. Digital sustainability concentrates less on the solution and technology and more on building an infrastructure and approach that is flexible with an emphasis on interoperability, continued maintenance and continuous development.

Digital sustainability incorporates activities in the present that will facilitate access and availability in the future. The ongoing maintenance necessary to digital preservation is analogous to the successful, centuries-old, community upkeep of the Uffington White Horse (according to Stuart Shieber) or the Ise Grand shrine (according to Jeffrey Schnapps).

Renderability

Renderability refers to the continued ability to use and access a digital object while maintaining its inherent significant properties.

Physical Media Obsolescence

Physical media obsolescence can occur when access to digital content requires external dependencies that are no longer manufactured, maintained, or supported. External dependencies can refer to hardware, software, or physical carriers.

Format Obsolescence

File format obsolescence can occur when adoption of new encoding formats supersedes use of existing formats, or when associated presentation tools are no longer readily available. Factors that should enter consideration when selecting sustainable file formats

include disclosure, adoption, transparency, self-documentation, external dependencies, impact of patents, and technical protection mechanisms.

Significant properties

Significant properties refer to the “essential attributes of a digital object which affect its appearance, behavior, quality and usability” and which “must be preserved over time for the digital object to remain accessible and meaningful.” Proper understanding of the significant properties of digital objects is critical to establish best practice approaches to digital preservation.

It assists appraisal and selection processes in which choices are made about which significant properties of digital objects are worth preserving; it helps the development of preservation metadata, the assessment of different preservation strategies and informs future work on developing common standards across the preservation community.”

Authenticity

Whether analog or digital, archives strive to maintain records as trustworthy representations of what was originally received. Authenticity has been defined as “. . . the trustworthiness of a record as a record; i.e., the quality of a record that is what it purports to be and that is free from tampering or corruption”. Authenticity should not be confused with accuracy; [an inaccurate record may be acquired by an archives and have its authenticity preserved.

The content and meaning of that inaccurate record will remain unchanged. A combination of policies, security procedures, and documentation can be used to ensure and provide evidence that the meaning of the records has not been altered while in the archives’ custody.

Access

Digital preservation efforts are largely to enable decision-making in the future. Should an archive or

library choose a particular strategy to enact, the content and associated metadata must persist to allow for actions to be taken or not taken at the discretion of the controlling party.

Preservation Metadata

Preservation metadata is a key component of digital preservation, and includes information that documents the preservation process. It supports collection management practices and allows organizations or individuals to understand the chain of custody Preservation Metadata: Implementation Strategies (PREMIS), an international working group, sought to “define implementable, core preservation metadata, with guidelines/recommendations” to support digital preservation efforts by clarifying what the metadata is and its usage.

Intellectual foundations of digital preservation

The challenges of long-term preservation of digital information have been recognized by the archival community for years. In December 1994, the Research Libraries Group (RLG) and Commission on Preservation and Access (CPA) formed a Task Force on Archiving of Digital Information with the main purpose of investigating what needed to be done to ensure long-term preservation and continued access to the digital records.

The final report published by the Task Force (Garrett, J. and Waters, D., ed.,: 1996), *Preserving digital information: Report of the task force on archiving of digital information*, became a fundamental document in the field of digital preservation that helped set out key concepts, requirements, and challenges.

The Task Force proposed development of a national system of digital archives that would take responsibility for long-term storage and access to digital information; introduced the concept of trusted digital repositories and defined their roles and

responsibilities; identified five features of digital information integrity (content, fixity, reference, provenance, and context) that were subsequently incorporated into a definition of Preservation Description Information in the Open Archival Information System Reference Model; and defined migration as a crucial function of digital archives.

The concepts and recommendations outlined in the report laid a foundation for subsequent research and digital preservation initiatives.

OAIS

To standardize digital preservation practice and provide a set of recommendations for preservation program implementation, the Reference Model for an Open Archival Information System (OAIS) was developed. OAIS is concerned with all technical aspects of a digital object's life cycle: ingest archival storage, data management, administration, access and preservation planning.

The model also addresses metadata issues and recommends that five types of metadata be attached to a digital object: reference (identification) information, provenance (including preservation history), context, fixity (authenticity indicators), and representation (formatting, file structure, and what "imparts meaning to an object's bit stream").

Preservation Strategies

There are various theories on the best way to preserve digital material, and a number of different approaches have been developed which in turn have variants. They range from preserving the original technology on which the archival digital objects ran, to preserving only the significant properties of an object, which are defined independently of any specific hardware or software platform.

Thidoeau suggests that a digital archive should take the following criteria into consideration while selecting a preservation strategy:

- 3 Feasibility : possession of hardware and software capable of implementing the chosen method
- 3 Sustainability : the method should be capable of being applied indefinitely into the future ; or there should be another path which will offer a sequel to the method if it ceases being sustainable
- 3 Practicality: Implementation should be within reasonable limits of difficulty and expense.
- 3 Appropriateness: the chosen approach should be appropriate for the particular types of digital objects to be preserved and the objectives of their preservation.

In Particular, he emphasizes appropriateness and applicability as important factors in deciding on an approach:

- 3 Decisions about appropriateness should be based on an informed evaluation of the significant properties of the object(s) to be preserved;
- 3 Some preservation methods only apply to specific hardware or software platforms, some to individual data types or formats, while others are very general. Depending on the range and variety of digital to be preserved by a repository, selection of approach might be limit to methods that are optimal for this range, or (if very wide ranging) a method with broad applicability should be chosen.

The two principal competing strategies are migration and emulation. These two approaches and some of their variants are considered here.

Migration

Migration is the preservation approach which has been most widely practiced to date. At its simplest it is defined as the copying or conversion of digital objects from one technology to another.

Whilst preserving their significant properties, Migration focuses on the digital object itself, rather than its environment; it aims to change the object in such a way that hardware and software developments will not affect its accessibility. It therefore applies to:

- ³ [Hardware: Copying digital object from one generation or configuration of hardware to another.](#)
- ³ [Software: transferring digital objects from one software application or file format to another.](#)

Emulation

Emulation refers to creating new software that mimics the operations of older hardware and software in order to reproduce its performance. Thus, not only the physical presence and content preserved, but also digital objects display original features (e.g., layout) and functionality available with the older software. Emulation has recently attracted attention as a potential to assist preservation recognizing that some electronic material that is highly dependent on particular hardware and software will not lend itself to migration.

Emulation is used to provide “backward compatibility” for video games, and to model how future systems might run. Emulator exists for some obsolete systems; however, emulation for preserving digital objects over the long term has not been widely tested or priced.

Software emulating hardware

This approach is aimed at enabling the technology of the future to emulate the original computer on which the creating software ran. In order to achieve this, three elements are preserved:

- ³ [The original file](#)
- ³ [software suite that rendered it](#)

- ³ [The hardware that ran the software.](#)

Out of paper or Microfilm

Outputting a hard copy of a digital file is a “low tech” solution that can result in a well- several hundred years. Certainly, this strategy could fix the object as a whole and preserve content and to some extent layout. However, a decreasing number of or publications (flat files, printable formats) lend loss for hypertext documents, and cannot capture multimedia. Despite these drawbacks, a “hybrid strategy” of creating both microfilm and digital copies enhances access and functionality, and microform copy acts as archival surrogate.

Preservation Technology

Another method for ensuring ongoing access to digital objects would be to simply keep older technology available for use. Although this would preserve content and enable future generations to view digital objects in their native format with original layout and functionality, creating hardware or software “museums” is prohibitive in cost, space and technical support requirements. At best, this method is an interim measure when migration is not possible.

Conclusion

It would be beneficial to both the preservation community and to those conducting research on issues of longevity, migration, and conversion if there were more venues for exchange of ideas, requirements and recent developments, Without a continuing dialogue between humanists, preservation, and the endeavors, and it is challenging for those of us outside the scientific community to keep up with and evaluate new product. It is hoped that the process of inter-sectoral dialogue on these and other related issues will lead to more regulated and formal processes for linking the needs of

scholars and preservation with the research agenda and scientific projects.

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