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Knowledge Society: Implications for the Indian Society

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To perpetuate the sweet memory of its Founder Director Professor Sachidulal Das Gupta, the School of Library Science of the Delhi Library Association instituted a Memorial Lecture Series way back in 1957. The inaugural lecture in the series was delivered by Shri B S Kesavan followed by Dr D S Kothari, Prof S Parthasarthy, Dr Jagdish S Sharma, Shri Girja Kumar, Prof S Parthasarthy, Prof M L Saini and Dr TAV Murthy.
Knowledge Society: Implications for the Indian Society

0 The subject taken for this lecture today is very topical and apt in the context of the establishment of the National Knowledge Commission (NKC) to make India a Knowledge Society. This event is of vital interest and high stakes for our profession as Knowledge Society accentuates the power of human knowledge as the means of achieving socio-economic development of any country. Our profession, has always been the forefront purveyor and suppliers of recorded information and knowledge for centuries. Now NKC has provided a new and unique opportunity for us to take a positive new direction in the service of the nation. But at the same time, it has also thrown a tremendous challenge to intensify our efforts to offer high quality services in information and knowledge to a variety of users, as there are other competing stake holders in the business of providing information and knowledge support services today.

01 This lecture will analyze these aspects in three sections. First about what constitutes a knowledge society and its features; why and how knowledge is deemed to be the most powerful economic force today than ever before, for determining the socio-economic growth and development of a country. Secondly the transformation of the Indian society into a knowledge society through policy decisions taken by the government of India. Thirdly excerpts from NKC about the establishment to describe its composition, terms of reference, objectives, organizational structure, Knowledge Pentagon, its Foci, E-governance, and finally the implications for library and information profession.

02 Inaugurating the launching of the National Knowledge Commission on the 2nd August 2005, our Prime Minister Dr. Manmohan Singh said, “It is now commonplace to say that the 21st Century will be the knowledge Century.

What exactly do we mean when we say this? I believe that this proposition implies that it is not military power or economic power that will in fact determine a nation’s place in the world now in the making, but it is Brainpower. Brainpower should of course be reflected in a country’s competitiveness as well as military prowess. More importantly it should be reflected in what Amartya Sen has called
**Human Capabilities.** Human capability is a function of the well being of people and the investment we make in human capital formation. The ability of a nation to make best use of its brainpower will shape its place in the world in the present century.”

A quick historical background to the emergence of a knowledge society would, perhaps, be in place, to put our discussion in proper perspective.

Human Society has always progressed on the basis of knowledge acquired by observation, experience, experiment, and understanding of the environment.

Even the cave men, in the course of time, started living in more secure places, near river banks for easy access to water, and learnt cultivation of land for food and domesticated animals. The society slowly evolved into an agricultural society which lasted for more than 10,000 years.

With the advent of the industrial revolution in the 14th Century in Europe which spread to the other parts of the world, the second transformation of society took place to usher an industrial society. In the Agricultural society the power structure was with the landed gentry. In the Industrial society which lasted till the middle of the 20th century, the foci of power shifted to the industrial class.

With the spectacular advances in Information and Communication Technology (ICT) from the middle of the 20th century, the powerful agent of change has been ICT which is a convergence of several technologies. Today human society is getting totally transformed with new paradigms and named differently by different writers, as Post-industrial society, the Third Wave, the Information age, Electronic Era, Scientific-technological Revolution, Information Society, Knowledge society and so on. Knowledge society seems to be more appropriate as knowledge is at the center of this transformation.

**1.0 Knowledge Society**

**11 Features**

While material advancement of a society has always been effected by information and knowledge in all societies, why is the modern society termed as a Knowledge Society?

Some of the different factors that have contributed to the changes that have led to the emergence of a Knowledge Society are: Unprecedented growth of new knowledge, its dissemination, distribution,
accessibility; globalization of trade, commerce and business; polity, governance, shifting power foci and levers of power and development planning and process of implementation, emergence of a professional class named knowledge workers and their predominant role and many others. One running thread of great strength that has caused every aspect of change is IT. The most amazing aspect of this transformation is the astonishing speed with which these changes are taking place; all these changes have taken place in a period of 50 to 60 years, More changes are expected in the 21st century.

12 Knowledge Universe

In a Knowledge Society, Knowledge comprehends a wide range of human skills. Knowledge arising out of R & D in science, technology, social sciences and humanities, individuals who are endowed with extraordinary and special gifts of inexplicable intuitive faculties for creativity, practical skills, experience, expertise, that may be their tacit knowledge, embedded knowledge in natural resources and man made artifacts. This is a complex mix of a knowledge universe which are applied for the progress of all round human development.

While in the western industrially advanced countries, the governments are pursuing their efforts to build up on the strength of new knowledge and innovation for governance and be powerful politically and economically in the international arena, for the business and industrial community world over, knowledge creation and management has become the crucial area for combating competition. They are heavily investing in research in the creation of new knowledge to take a lead position in the fierce competition of global market.

The main points that flow from the above observations about knowledge society are:

• The breathless speed and rapidity with which changes have taken place in human material living; in the 20th century and the changes that might take place in the 21st century;

• These changes have effected each and every aspect of the life of the people;

• The changes have been triggered by great advances and development of the synergising effect of science and technology;

• The converging IT technologies have provided unprecedented facilities for knowledge creation, recording, dissemination, access,
availability, leading to a wide variety of applications;

• These changes are seen in the western societies mostly but slowly but surely catching up by the developing countries;

• A new class of knowledge workers is emerging, whose knowledge and skills are considered as the intellectual capital of an organization;

• Most importantly the power foci is shifting largely on account of the concentration on Knowledge creation and emergence of the knowledge workers;

• There is bound to be unequal distribution of wealth, power and benefits even in the industrially advanced countries, more pronounced in developing countries;

• Knowledge is a complex mix of intellectual creation and innovation, practical skills in applications, operation and management of resources leading to socio-economic development, tacit knowledge of individuals and embedded knowledge in nature and human artifacts;

• The business and industrial class are in the forefront in these endeavours of creating new knowledge.

2.0 The Indian Society

Ever since the liberation policy of the government on the economic front, the economic growth rate of our country has been steadily rising. Particularly in the last couple of years, the growth rate has been higher than ever before, promising further acceleration of growth in the years to come.

This is largely caused by the ebullient manufacturing industries, combined with IT software and pharmaceutical industries and a few others. These are now poised for further success.

Economic pundits are predicting that the country could leapfrog to become an economic power in the coming decades. One important factor that could bring strength to our efforts is the Indian human capital of educated, skilled, hardworking and English speaking managers, scientists, engineers and workers. Demographically India has the youngest workforce of any large economy, a status that will be maintained for long. India will be the largest contributor to the additional working age and population globally over the next few
decades. Converting the growing working population into a virtuous asset—creating productive jobs—higher consumption, higher savings, higher investments leading to higher levels of economic growth—represents the greatest promise albeit a severe challenge.

While this status of potential economic prosperity comforts us, there are forces that could retard progress and pull the economy even backwards. Some of these are the abject poverty of a large percentage of our population, struggling for bare existence, fall in agricultural production, unemployment among unskilled and less skilled population, terrorism, corruption at every level, not only eating our vitality, but also corroding our resources and retarding growth rate. These are indeed very disturbing and problems of huge magnitudes.

Despite these strengths and weaknesses, the government has launched NKC to harness our strength and effectively combating our weaknesses, in creating a knowledge base through research and development and build up the necessary human capital.

Fortunately, the country has built up the necessary basic infrastructure for R & D activities for creation of new knowledge, thanks to the vision and foresight of our first Prime Minister Pandit Jawaharlal Nehru. He eloquently articulated the Scientific Policy Resolution (SPR) of the Government of India in 1958, the first landmark towards Knowledge creation and its application in the country. SPR states, ”the dominating feature of the contemporary world is the intense cultivation of science on a large scale and its application to meet a country’s requirements. It is this which for the first time in man’s history, has given the common man, in countries advanced in science, a standard of living and social and cultural amenities which were confined to a very small and privileged minority of the population. It is only through scientific approach and method and use of scientific knowledge, the reasonable material and cultural amenities and services can be provided for every member of the community and it is out of the recognition of this possibility that the idea of welfare state has grown.”

21 The launching of NKC is the second landmark towards the approach policy investing in knowledge creation and use. It was formally launched on the 2nd August 2005, by our Prime Minister Dr Manmohan Singh. The main points that constituted the inaugural speech of Dr Singh were:

• Human Capital is the fulcrum of efforts towards knowledge creation;
• The demographic structure of our working population in the decades to come would be the youngest in the world which has a tremendous potential asset for growth;
• The task ahead is at many levels, more particularly from primary schools to higher education and research institutions of national excellences all of which should be world class;
• In creating a knowledge base of our economy, NKC must leverage it to make India truly the “knowledge engine”; 
• The role of libraries and information centers would be extremely important for the foundation of the knowledge economy;
• NKC to come forward with bold proposals aimed at improving excellence in research and teaching, especially in the frontier areas of mathematics, science and technology.

3.0 Excerpts from NKC Website

31 Composition of NKC, Terms of Reference and Objectives

NKC is composed of honorary members of eminence, scholarship, academic and professional achievements, scientists and technologists with expertise in management and persons of vast experience, under the chairmanship of Dr Sam Pitroda of international reputation. The names of the other members are: Dr P M Bhargava (Vice-Chairman), Dr Ashok Ganguly, Dr Jyaniti Ghosh, Dr Deepak Nayyar, Dr Nandan Nilekani. Dr Andre Betille and Dr Pratap Bhanu Mehta.

Established on 13th June 2005, NKC has a time frame of three years from 2nd October 2005 to 2nd October 2008 to achieve its objectives.

The organization structure of NKC is given in Figure 1.

**Fig 1. About NKC Organisation**

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Prime Minister
  ↓
Planning Commission ←[arrow] Chairman ←[arrow] Ministries/States
  ↓
Members
  ↓
Support Staff
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NKC will be assisted by a technical support staff, officers on special duty, a National Steering Group under the Chairmanship of PM. The group includes the Ministers of Human Resources Development, Agriculture, Commerce and Industry and Communication and Information Technology, State Minister of Science and Technology and the Deputy Chairman of the Planning Commission.

Three Advisers to assist NKC in their tasks are for Open and Distance Education, Public Information and Innovation, S&T Networks and Education respectively.

The Planning Commission is the nodal agency for planning and budgeting purposes as well as the handling Parliament related responses.

The methodology of the NKC is to be form Working Groups with each of its focus areas and make concrete proposals for reform, directly to PM through series of white papers. The Working Groups are:

1. Undergraduate Education;
2. Libraries and Information Services; and
3. Language Policy.

**NKC: Terms of reference**

- Build excellence in the educational system to meet the knowledge challenges of the 21st century and increase India’s competitive advantage in fields of knowledge;
- Promote creation of knowledge in S&T laboratories;
- Improve the management of institutions engaged in intellectual property rights;
- Promote knowledge applications in agriculture and industry;
- Promote the use of knowledge capabilities in making government an effective, transparent and accountable service provider to the citizen and promote widespread sharing of knowledge to maximize public benefit.

**NKC objectives**

The overall task before NKC is to take steps that will give India the ‘Knowledge edge’ in the coming decades, i.e, to ensure that our country becomes a leader in the creation, application and dissemination of knowledge.
• **Creation** of new knowledge principally depends on strengthening the education system, promoting domestic research and innovation in laboratories as well as at the grassroots level and tapping foreign sources of knowledge through more open trading regimes, foreign investment and technology, licensing;

• **Application** of knowledge will primarily target the sectors of health, agriculture, government and industry. This involves diverse priorities like using traditional knowledge in agriculture, encouraging innovation in industry and agriculture and building a strong governance framework for public services;

• **Dissemination** of knowledge focuses on ensuring universal elementary education, especially for girls and other traditionally disadvantaged group, creating a culture of lifelong learning especially for skilled workers, taking steps to boost literacy levels, and using information and communication technology (ICT) to enhance standards in education and widely disseminate easily accessible knowledge that is useful to the public.

### 32 Focus areas of NKC

NKC has visualized Knowledge base as a Pentagon, the five focal areas being Access to knowledge, Knowledge concepts, Knowledge creation, Knowledge applications and Knowledge services as given in Figure 2.

**Fig 2 Knowledge Pentagon**

<table>
<thead>
<tr>
<th>Access</th>
<th>Creation</th>
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<tbody>
<tr>
<td>Concepts</td>
<td>Applications</td>
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**Access to knowledge:** Access to knowledge is one of the most fundamental issues in a knowledge society. Even if universities, research institutions and laboratories produce large amounts of knowledge, it will be of little use until the majority of the population actually possesses adequate means to acquire, absorb and communicate this knowledge.

**Knowledge concepts:** Advances in knowledge and its applications are products of human endeavour; therefore it is of utmost importance that
we nurture the skills and intellectual capacities of our largely youthful population in order to build a strong base of human capital that can transform India into a strong knowledge economy.

**Knowledge creation:** Although India has the option to borrowing new knowledge from abroad, it is important to create self-sufficiency by promoting indigenous research, especially in Science and Technology. S&T has the ability to accelerate the processes of other parallel knowledge objectives, leading to economic growth and security.

**Knowledge applications:** The creation of knowledge cannot be directionless. To derive maximum benefits from our intellectual assets, we must apply knowledge in fields like agriculture, industry, health, education, etc. where productivity can be enhanced. Knowledge application is both a goal in itself and a facilitator of progress in these important sectors.

**Knowledge services:** Investment in knowledge services will produce large-scale benefits for the common man. Technology has the potential to make government services and functioning more accountable, transparent and efficient. E-governance can change the way in which the citizens of India perceive and interact with the government.

Thus, the Knowledge Base is a Knowledge mix as mentioned earlier, which would be dynamic, and ever growing. For all developing activities, the Knowledge Base would provide the power capital.

### 3.3 E-Governance

A very important set of ten recommendations of the special group of NKC under Dr. Nandan Nilekani is with reference to E-Governance. When these recommendations are implemented, there will be far reaching results to transform our government machinery into a new system. The basic philosophy of e-governance the Special Group says, ”is more about an opportunity for administrative reforms than merely about electronics and information technology and infrastructure.”

Summing up the recommendations, “We need to reengineer our processes first, to change our basic government pattern for simplicity, transparency, productivity and efficiency; select 10 to 20 important services that make a critical difference, offer web-based services, develop common standards and deploy common platform/infrastructure for e-governance to make it citizen-centric. As a next step we recommend focusing on the organizational issues related to reengineering government processes with strong committed
leadership, autonomy, flexibility, clarity of purpose, predefined deliverables, measurable milestones and periodic monitoring in order to implement national e-governance programme within 3 to 5 years,”

34 Implications for the Library and Information Profession

The most relevant and significant feature of NKC that concern our professional interests is the Working Group on Libraries and Information Services. An elite group of professionals and experts, headed by Smt Kalpana Das Gupta, has made the following recommendations under the following heads, considering the urgent need for reform in Libraries and Information Services (LIS) Sector:

1) Set up a National Commission on Libraries;
2) Prepare a National Census of all Libraries;
3) Revamp LIS Education, Training and Research facilities;
4) Re-asses Staffing of libraries;
5) Set up a Central Library Fund;
6) Modernize library management;
7) Encourage greater community participation in library management;
8) Promote Information Communication Technology (ICT) applications;
9) Facilitate donation and maintenance of private collections;
10) Encourage Public Private Partnership to LIS development.

The five annexures to the recommendations are: 1) National Mission on Library and Information (NMLIS); 2) Indian Institute of Library and Information Science (ILIS); 3) Staffing of Libraries; 4) Modernizing Library Management; 5) Private and Personal Collections.

(The details of these recommendations can be seen in NKC Website)

The implications of these recommendations will have far reaching results both in terms of reengineering our professional system and introducing a new class of professionals who will manage LI systems and services for the Knowledge Century. The younger professionals who will emerge in the next decade will have the opportunities to avail and face challenges.
4 Conclusion

The establishment of NKC is a most significant event of this decade which promises to transform the Indian Society into a Knowledge Society. Hopefully the NKC, in its further step towards this transformation, as it says will have consultations, invite ideas and inputs and formulate the action plan. This work has already started and must be in progress for executive action.
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Prof T N Rajan

Synopsis

In a Knowledge Society, knowledge is the powerful resource that would provide the bones and sinews for socio-economic development of a country. While historically all societies have thrived on the basis of knowledge, it is only from the second decade of the 20th century, knowledge has taken the central place in all the developmental process. It is because of the huge investments in knowledge creation and use, through Information and Communication Technology. A new Knowledge Universe is perceived which comprises Knowledge created by R & D, tacit knowledge of individuals and embedded knowledge in natural resources and artifacts.

The Indian Society is poised for economic growth with the liberation economic policy of the Government. Economic pundits predict India will emerge as a strong economic power in the next few decades. Despite numerous problems which are threatening the pace of economic growth, the government has established the National Knowledge Commission (2005) to create the Knowledge strength for application in the diverse spheres of developmental activities. A knowledge Pentagon is visualized with five focal areas viz. Access, Concepts, Creation, Applications and Services which constitute a Knowledge base. Concrete proposals for E-Governance have been recommended to reengineer the government machinery to be citizen centered.

One of the Working Groups of NKC is for Libraries and Information Services. Ten recommendations have been made with 5 special annexures ny an elite group of professionals and experts. It is likely that a new class of professionals would be turned out in the next few decades who will manage Library and Information Services in the light of socio-economic development processes suggested by NKC. The Knowledge Society of the 21st century will throw new opportunities and challenges to the library and information professional community.

The establishment of NKC is a very important Indian landmark in the her economic growth in the 21st Knowledge Century. With its action plan for implementing the recommendations of NKC, there will be far reaching changes in our Society, transforming the Indian Society into a truly Knowledge Society.

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Prof T N RAJAN
A Brief Bio Data

Professional Experience of 56 Years
Associated with University of Madras
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Insdoc (Niscair) (24 years): Retired in 1988
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IVY Systems, NE Hill University
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Life Member of DLA, Iaslic and SIS
Hobby: Classical Carnatic Music