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Collection Development and Organisation of Art Materials: The
Cultural Center of the Philippines in Context" (E. R. Peralejo); (4)
"Resources for the Conservation of Southeast Asian Art" (S. G.
Swartzburg); (5) "The Moravian Mission and Its Research on the
Language and Culture of Western Tibet: A Case Study for Collection
Development" (H. Walravens); (6) "The National Art Library and the
Indian Collections of the Victoria and Albert Museum, London" (J. F.
van der Wateren); (7) "Collection Development and Acquisition of Art
Materials with Special Reference to South and South-East Asia: A Case
Study of the Indira Gandhi National Centre for the Arts" (A. P.
Gakhar); (8) "Map Collection of the National Library and Its Users'
Pattern" (D. K. Mittra and A. K. Ghatak); (9) "Russian Maps of Asia"
(N. Ye. Kotelnikova); (10) "A Survey of Maps and Atlases Published in
India" (A. K. Ghatak); (11) "Government Libraries in India: An
Overview" (M. K. Jain); (12) "Technology as an Agent for
Communication" (E. J. Valauskas); (13) "Changing Duties: Relations
between Library and Information Work" (A. G. A. Staats); (14) "Access
to Scientific and Technical Information: The Greenlight or Not?" (D.
Stoica); (15) "Initiatives To Facilitate Access to S&T (Science and
Technology) Information in India" (A. Lahiri); (16) "Improving Access
to Scientific Literature in Developing Countries--A UNESCO Programme
Review" (A. Abid); (17) "Science, Technology and Libraries in
French-Speaking Africa" (H. Sene); (18) "Productivity, Impact and
Quality of Scientific Work at the UNAM (National Autonomous
University of Mexico): Actions for their Acknowledgement" (P.
Dector); (19) "The Post-Perestroyika Sci-Tech Libraries: Will They
Survive?" (A. Zemskov); (20) "Access to Information and Science
Development in the Developing World" (S. Arunachalam); and (21)
"Manuscript Collections in Indian Libraries with Special Emphasis on
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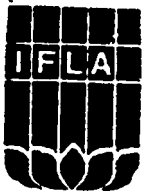
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Joint Meeting with:

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~~WORKSHOP~~ THEME (IF APPLICABLE): Collection Development and
Acquisition of Art Materials with special reference to South
and South East Asia

From Indochina to Afghanistan:
Arts from abroad in Parisian libraries

by

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Paris

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From Indochina to Afghanistan: arts from abroad in Parisian libraries

Francis Macouin

I wanted to find a way of keeping you interested and so have avoided creating a dry list of organisations in Paris connected with the art of those regions which stretch from Vietnam to Afghanistan. I am therefore going to try to explain the present situation, letting myself be guided by history, and to remind you of the changes currently under way.

The interest which first took the French to India and to the area which since the end of the 19th century has been called Indochina - although at the time it was called India across the Ganges - was at first political, commercial and religious. However the exchange of embassies between Louis XIV and the King of Siam, Phra Narai, in the 17th century came to nothing. French ambitions in the Indian peninsula were abandoned with the Treaty of Paris in 1763, which concluded one of the numerous wars between France and England. Nonetheless there was as a result a certain amount of intellectual curiosity about these regions and I cannot miss the chance of reminding you of the first French Indianist, Anquetil-Duperron (1731-1805). He got himself taken on as a soldier in the Compagnie des Indes in 1754 in order to research the books of Zoroaster (Zarathustra) and the Vedas. In 1801-1802 he published a Latin translation of the Upanishads, which was consulted intensively by Schopenhauer. He also got together the collection of Sanskrit manuscripts which was added in the 18th century to the Bibliothèque Nationale (then the Bibliothèque Royale). By way of detail I should point out that an Englishman, Alexander Hamilton, was responsible for the first catalogue of these manuscripts, while he was held prisoner in Paris in 1803 during another war between France and England.

In the course of the 19th century oriental studies developed considerably. To remind you of a few of the stages: teaching of Sanskrit (and also of Chinese) began in 1814 at the Collège de France, which is the highest and most specialised educational institution in France. A learned society, the Société Asiatique, was founded in 1822. A Chair of Malay and Javanese was created in 1841 at the Ecole des Langues Orientales Vivantes, now the Institut National des Langues et Civilisations Orientales (NALCO).

The Société Asiatique, which was set up in Paris on the model of the Société des Sciences et Art de Batavia (founded in 1778) and of the Société Asiatique de Calcutta (formed in 1784), is still in existence and brings together almost all French specialists in the field.

Although its area of interest covers all of Asia and even further afield, from North Africa to Japan, it plays an important role in the Indian domain. It also manages an important orientalist library containing exchanges and donations (the Alfred Foucher legacy) in which one can find valuable early documentation on art.

But although oriental studies were developing in the 19th century, it was not until the end of the century that oriental art, or more exactly archaeology, i.e. the study of ancient arts and monuments, became a specific area of study to which several institutions devoted themselves. No doubt this change was partly due to the problem posed by the discovery of Angkor and of the other Cambodian monuments after France had begun to colonise the Indochinese peninsula in the 1860s.

To cope with these impressive architectural ensembles, largely buried in the surrounding vegetation, the Commission Archéologique de l'Indochine was created in 1898. In 1901 this became the Ecole Francaise d'Extrême-Orient (EFEO) . This is not a teaching establishment but a body which offers young researchers the opportunity to undertake long study visits to the Far East. Its remit goes beyond Indochina and archaeology, since it is responsible for the listing and protection of antiquities in the countries which were under French administration, and it works like a directorate for the historic monuments of Indochina. In particular it continued the restoration of Angkor up until 1975. Prior to 1954 it had its headquarters and library in Hanoi, but decolonisation and wars, the latter especially in the Indochinese peninsula, forced it to move back to Paris and to reorganise its activities. In particular it had to rebuild its library, today a rich collection of some 65,000 volumes of which 20 per cent are on art. Part of the original collections, which remained in Hanoi, ended up in the Bibliothèque des Sciences Générales de Ho-chi-minh-ville (Saigon).

Oddly enough the French were also present at the other end of the geographical area I am discussing here, in Afghanistan. In 1922 an agreement was signed between that country and France. The first article stated:

> "Because of the friendly relations which so happily exist between the two governments and because of the particular developments in science achieved by France His Majesty the King of Afghanistan grants to the government of the Republic of France the exclusive privilege of carrying out excavations in the entire extent of Afghan territory."

This agreement, later tacitly renewed, allowed the French to make archaeological surveys

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until 1975. It also established precise rules for the division of the finds between the two countries. The French organisation in charge of these activities, the Délégation Archéologique Francaise en Afghanistan (DAFA), worked very closely with the Musée Guimet, where the French part of these findings is held.

This museum is named after its rich industrialist founder, Emile Guimet. It opened in Paris in 1889 as a museum of the history of religions. Its creator had tried to assemble, around his existing important Japanese collection, ritual objects and representations of the pantheons of many Asiatic religions. After Guimet's death in 1918 the museum gradually evolved into a museum of Asiatic art. Some time before 1930 it absorbed the collections of the Musée Indochinois at the Trocadéro, which had been set up after the Universal Exhibition of 1889. The transformation was completed in 1945 when the Asiatic collections which had been at the Louvre were transferred to the Musée Guimet. The latter, in exchange, gave the Louvre its collections of non-Asiatic material. The Museum's founder had wanted his museum to be a centre of studies and it therefore needed a library; this formed part of the Museum from the start, and followed the changes in its growth, becoming the specialist library in this domain with which we are now familiar.

The arts of India, and those of the peninsula of Indochina and of Indonesia, were not taught formally until 1928. The first course was established at the Ecole du Louvre. This high-level school, founded in 1882, has strong links with the national museums and the courses are usually well attended by the curators of these museums, including those of the Musée Guimet. As well as a general introduction to the arts of Asia, which is given to all students. each year there is a course which deals with a specific subject related to South or South-east Asia. The school's own library, opened in 1932, acquires the course materials for this specific module. Over the last ten years it has built up a serious collection at a high academic level, which I hope will continue to grow substantially.

Another course is given in two universities (Paris IV and Paris I) which stemmed from the break-up of the old Université de Paris. This allows students to study Indian art as part of their first degree. The obvious library for the students of these universities is the Bibliothèque d'Art et d'Archéologie, which was set up between 1908 and 1914 by the couturier Jacques Doucet. In 1933 it was uncomfortably housed in a building in the Moorish style but it has suffered over the years from being confined in quarters which have become far too small for its needs. Admission is now restricted to post-doctoral students.

Having for many years suffered the deprivation imposed on French university libraries it has developed very little in the area of the arts of Asia. Although it has been responsible since 1980 for receiving all scientific publications devoted to the arts, its holdings on India remain weak.

If I look back at what I have just been saying, it is clear that there is really only one library in Paris which has the mandatory obligation of covering the art of the south and south-east of Asia, as well as the art of the Far East, and that is the library of the Musée Guimet. The Museum, in addition to its role as a national museum, ensures the specialised teaching at the Ecole du Louvre and houses the Parisian headquarters of the two CNRS teams which carry out archaeological prospecting in southern Asia. One of these, Archéologie de l'Asie Centrale, is the successor to DAFA, which was suppressed in 1982 because of the situation in Afghanistan; the other, the Centre de Recherche Archéologique Indus-Baloutchistan (UPR 316) excavates in Pakistan. The library located within the Musée Guimet is thus at the core of a group concerned with the arts of Asia. At the same time as being a specialised library for research at a high level it is also open to the public. It offers its services freely and unconditionally to its readers. To give some idea of its size I will say simply that its collections number some 100,000 volumes and that it has some 1,500 periodical titles. The other important documentation centre, the library of EFEO, is less specialised but is indispensable for South-east Asia.

Obviously Paris, thanks to its other libraries, offers resources which cannot be ignored. An art library like the Bibliothèque Forney offers a facility for the general public looking for material on the arts of the Orient and is especially strong in material on the decorative arts. For certain queries the Centre de Documentation Muséologique of ICOM, which is responsible to UNESCO, can be useful. Equally, as in other subject areas, it is difficult in France to manage without the Bibliothèque Nationale, and its collections in the oriental languages are extremely valuable. In certain cases it can be useful to consult the archives of the Société de Geographie, managed by its Department of Maps and Plans. And one should not forget the libraries of a number of other institutions, to which I shall come back in a moment.

So far I have spared you the detail of what can be found in the institutions mentioned. I would, however, like to mention two categories of document which are particularly important in the field of art, viz. photographs and archive documents. Photographs are sometimes cared for by libraries and sometimes by a separate service, not generally for

doctrinal reasons but more often for practical ones, or because of the historical development of the institution. There is a great deal of this photographic documentation, and it is extremely important. I will quote a few figures: there are 150,000 photographic documents at the Ecole Francaise d'Extrême-Orient; at the Musée Guimet there are approximately 50,000 lantern slides; the Bibliothèque d'Art et d'Archéologie has 140 boxes of photographs on the Orient; and recently the Musée de l'Homme discovered that it had 18,000 negatives on Indochina. These documents have been given less care than books and their condition is not particularly good. They are not all inventoried, and still fewer are catalogued, while their conservation state is extremely worrying.

The other category of documents which I mentioned is archives. The Archives Nationales is the specialist department for the deposit of all official documents. But until recently this body did not take into account the papers of individuals, or private archives, nor those of learned societies or commercial firms. Amongst this material there are items of great importance, such as the notes of archaeologists, unpublished writings and the correspondence of numbers of learned people. Such documents are often given or left to libraries, and usually called manuscripts, while in archives they are generally known as papers. The various institutions which I have listed all possess such material to a greater or lesser extent, and I only want to add that the library of the Ecole Francaise d'Extrême-Orient holds daily papers and monthly reports of excavations carried out in Indochina since 1898. It also has plans and lists of the monuments studied.

As I said earlier, besides several important specialist institutions or collections within them, Paris has numerous other collections of interest. Frequently an official structure, known as an institute or a centre, grows up around a professor or a small group of specialists, and is generally intended for research into a particular subject area. These institutes belong to different administrations, such as the University, the Collège de France, the Centre National de la Recherche Scientifique (CNRS), and each very rapidly develops a small library. These institute libraries are often precious because, thanks to the staff being in close touch with international research, they house documentation which is very difficult to get hold of through normal channels. However they have some inconvenient features. The length of their existence is not guaranteed; they are likely to disappear when the staff who have started them leave, or when the research which they were created to support is complete, or when there is an administrative reorganisation. The books are obviously not destroyed but form at best a dead collection within an institution which has no need to consult them.

Another problem is that of accessibility. These libraries, even when they are well cared for, function for the almost exclusive use of members of the institute. They are therefore very private libraries, open only rarely, and their documentation, even though bought largely with public money, remains unusable by a wider public.

However, two developments are currently under way in our subject area whose convergence will remedy some of these inconveniences. Several institutes with related specialisms are being brought together, and will have a shared reading room where the different catalogues can be consulted. A minimum input of co-ordination is planned to overcome the main inconsistencies. These developments were set in motion by the grouping together in a new building of a group known as Instituts d'Asie du Collège de France. Amongst these is the Institut de Civilisation Indienne (founded in 1928) which studies India up to the 16th centry. Even though its acquisitions are centred on Sanskrit texts and philosophy, its library of 60,000 volumes includes general documentation on art which has been acquired more recently.

This co-operative integration is also the solution which appears to have been reached by a library which is provisionally, and rather less pompously, called Bibliothèque d'Asie. Several institutes will join the library of the Ecole Francaise d'Extrême-Orient, including the Centre d'Etude de l'Inde et de l'Asie du Sud-est (CEIAS), which concentrates on the modern period in this region. In this case the planned integration will be taken a little further: the collections will be brought under the control of a librarian/curator and there will be a shared automated catalogue. Opening is scheduled for early 1994.

Allow me at this point a short digression on the subject of automation. For Asia one has to take into account numerous non-Western scripts, complete with accents. Tools for automation were for a long time non-existent in this area, and are still rare. The library of the Musée Guimet, in collaboration with the new Bibliothèque d'Asie, is hoping to use the possibilities offered by Apple Macintosh computers and to instal, in the not too distant future, a catalogue in which the documents will be described using their own scripts.

After talking about the developments which I have just detailed I must also raise a question which risks turning the little world of Paris art libraries upside down. You know that it has been decided to create a large new Paris library which will partly succeed the Bibliothèque Nationale. Space will be created when the printed books from the BN, i.e. the books and periodicals, are moved to their new accommodation. Someone has had the

bright idea of moving the Bibliothèque d'Art et d'Archéologie, which is about to die of suffocation, into this space. One would need to add the library of the Louvre since by an amazing oversight this library is not catered for in the plans for the new Grand Louvre. One might also add smaller collections such as that of the Ecole des Beaux-Arts. Thus a great library of art would be established in Paris. Will this project, known as the Bibliothèque Nationale des Arts, include the arts of Asia? The question has not yet been settled, but it seems likely that the new library will concentrate on classical antiquity and on Europe, and that one would separate out the archaeology. Even if this new institution is limited to a narrow occidental vision, its creation will in all likelihood involve much modification in the picture which I have just outlined.

I will finish with three statements. The first is that, in France, documentary resources are concentrated in Paris. Secondly, I must point out that students in their early years of study have still not got the library which they need. Finally modern Indian art is not covered at all, no organisation having the responsibility to collect contemporary documentation. Nevertheless, now that you have heard my story you will see that, even if there are shadows in the picture, the past century has seen the creation of a not inconsiderable body of documentation for the study of the art of South and South-East Asia.
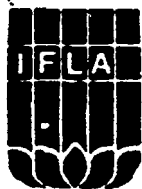
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Section/RT: ART LIBRARIES SECTION

67-ART-2-E

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

The Indonesian Archeology Photograph
and Documentation System (IAPDS) in Leiden

by

Ms. Dr. H.I.R. Hinzler
Leiden University, Netherlands

SUMMARY

THE INDONESIAN ARCHAEOLOGY

PHOTOGRAPH AND DOCUMENTATION SYSTEM (IAPDS)

by H.I.R. Hinzler

On December 1st 1989 the *Indonesian* Archaeology Photograph and Documentation System

(IAPDS) was launched in Leiden. The project is planned to last three years. It contains a

photographic and a documentation aspect. The photographic aspect concerns firstly the

conservation of the collection of black and white photographs of the Archaeological Service

of the Netherlands-Indies made between 1901 and 1941 and of the Indonesian

Archaeological Survey from 1945-1955. This collection consists of 21,855 photographs,

16.500 of which are kept in Dutch Collections, in particular in Leiden University collections.

Secondly, the project envisages making a set of negatives of the complete collection, and

new, large prints which will be used by students and researchers. They will be kept at the

Leiden University Library and can be studied at the Oriental Department.

The documentation aspect means the making of a data base in which the relevant data on the

photographs are given, not only data for administative purposes, but also data on the subjects

depicted, and references in literature. In a later phase it is intended to add other

archaeological photo collections not only from Southeast Asia, but also from South Asia kept

in The Netherlands.

THE INDONESIAN ARCHAEOLOGY

PHOTOGRAPH AND DOCUMENTATION SYSTEM (IAPDS)

by H.I.R. Hinzler

Introduction

On December 1st 1989 the *Indonesian Archaeology Photograph and Documentation System* (IAPDS) was launched in Leiden. The project is financed by a special grant from the Ministry of Education and will last three years. The increasing number of researchers and students of Indonesian Archaeology, Art and Material Culture, the vast number of photographs (black and white), drawings, maps and other documents regarding Indonesian art (temples, monuments, stone and bronze statues and inscriptions from the 4th to the 16th century) and culture (colonial houses, furniture, earthenware, paintings from the 17th to the early 20th century) kept in Dutch collections, in particular those of the Leiden University and the institutes and museums has given rise to various pressing concerns. There was 1) the need for the conservation of the older photographic material, dating from the second half of the 19th and the beginning of the 20th centuries, and, since there were no longer any negatives, 2) the need to make new negatives from the old photographs. Moreover, since many old photographs had begun to turn yellow or brown, there was 3) the need to make a set of new prints to be used by students and researchers. Finally 4) a necessity was felt to open up the collections for scientific purposes, namely study and education.

The Photographs

Although in 1844 Daguerreotypes were already made of the antiquities in the Batavia Museum (66 items) and in 1855 of the Borobudur, the most important Buddhist monument in Central Java, (58 items) by the German photographer A. Schäfer, and between 1862 and 1872 about 398 photographs of ancient buildings and statues from Java on glass negatives

were made by the Dutchman I. van Kinsbergen, the core of the photographs of Indonesian antiquities is formed by those of the 'Archaeological Survey' , formerly of the Netherlands Indies, now of Indonesia. This photo-collection was established after the foundation of the 'Commision for the Archaeological Research in Java and Madura in the Netherlands Indies' on 18 May 1901. Photographs from the Netherlands Indies (now Indonesia) and from British India (now India, Bangla Desh and Pakistan) were collected and listed separately in the Archaeological Reports from 1902 onwards (see for instance OV 1912: 80-87 and 90-112). The collection of photographs of Indonesian antiquities started with No. 1 in 1901, ended temporarily with No. 15,414 in October 1941 as a result of the outbreak of World War II and the Pacific War, and was resumed from March 1947. After the foundation of the Indonesian Republic, the Archaeological Survey changed names several times, but the collecting of photographs continued. Prints of these photographs were and still are kept in the offices of the Archaeological Survey in Java (Batavia - now Jakarta-, and Yogyakarta) and in various university institutions, libraries and museums in Holland, in particular in Leiden and Amsterdam, where Indonesian Archaeology was taught at a University level after 1921 and 1946 respectively. The present collection consists of more than 25,000 items. In Leiden there are 21,855 items of the Archaeological Survey collection kept in various institutions. A large number of these photographs, both negatives and prints, are already subject to a process of deterioration in Holland as well as in Indonesia.

Importance of the Photographs

The importance of the photograph as a document has increased, since it has transpired that many of the original antiquities (buildings, statues, inscriptions) have disappeared or are now subject to rapid decay. It appears, for instance, that the profiles of buildings that used to be sharp and angular have now become smooth and rounded. Reliefs that used to be rounded and filled with refined details are now indistinct, flattened almost smooth and covered by mosses and other vegetation. Sometimes these monuments have been restored in such a way,

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that they no longer resemble the original buildings.

Identification of reliefs, of details of statues, investigation of how a monument was built, now is sometimes only possible with the help of the old photographs.

Conservation of Old Photographs

It was obvious that these valuable. old photographs had to safeguarded. It was decided to rescue the prints of the collection of the University of Leiden. The prints were glued onto white and black cardboard of various sizes (11 x 14.8 cm; 18 x 25 cm; 20 x 16 cm; 20 x 17 cm; 25 x 32 cm; 34 x 25 cm; 35 x 25 cm; 35 x 50 cm, 50 x 75 cm). The glue and the cardboard, in particular the black type, were not acid-free. Because it was too expensive to separate the photographs from the board, transparent, acid-free Melinex pockets of various sizes were made to put the prints and their cardboard backings in. Then they are stored in boxes of acid-free cardboard. The majority of the photographs fits in boxes of 38 x 26 x 17.5 cm (200 registration numbers per box), but for the larger sizes special. large boxes have been made. The boxes are stored in the climatized vaults for films of the University Library in Leiden.

As a rule they can no longer be consulted for educational purposes or study. Only in exceptional cases may they be examined by a serious researcher.

New Negatives

The IPADS project envisages making a set of new negatives of the complete collection. These can be used for publications. The budget of the project was not sufficient to use large sized negatives (10 x 12 or 15 x 20 cm), but tests with the most recent black-and-white films 36 mm films proved that the Kodak TMax films of 100 Asa resulting in prints of 17.5 x 20 cm, are as good as those from large sized negatives. Each film that is newly made, contains only 35 shots, because - cut into 7 strips of 5 shots - it then fits exactly in a paper negative sheet. The sheets with the negatives and the negatives themselves are registered and put into an acid-free cardboard box. These boxes are also stored in the climatized vaults for films in

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the University Library.

New Prints

A set of new 17.5 x 20 cm prints is being made. These new prints are being mounted in passe-partouts of acid free paper.

The passe-partouts are of a special design. The format is 25 x 70 cm, and it can be folded in the centre, in order to obtain the size of 25 x 35 cm. In one side of the paper a rectangular aperture has been punched measuring 17.3 x 19.8 cm. A transparent sheet of Melinex glued onto the aperture with transparent acid free tape protects the print. The prints are glued along one side, that of 20 cm, onto the passe-partout with acid-free white tape. Each print is provided on the back with the registration number given by the former 'Archaeological Survey', the new registration number and the number that has been given to the new negative. This facilitates reproduction if needed by a student or researcher. The new prints are being put into the same type of acid-free cardboard boxes as the old photographs, but now only 80 items can be put into a box. Each box is provided with a box-number and the registration numbers of the prints it contains. The boxes are kept in the climatized manuscript vaults of the Oriental Department of the University Library of Leiden.

Data Base and Documentation

The documentation aspect means the making of a data base in which the relevant data on the photographs are given. The software programme used for the data base is INMAGIC. The advantage of this programme is that it can be converted into any other data base programme, into PICA, and used in combination with VIDEO and WORM DISCS, so that in a later phase the photographs can be shown on a monitor. The INMAGIC programme is also chosen because it is used in Indonesia, so the data base can be easily exchanged with our Indonesian colleagues.

The hardware provided for the project consists of a Tandon 386 computer with three data packs of 40 MB. One data pack would be sufficient for a data base of 25,000 items. The two

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other data packs are in use for back-ups.

Existing data base systems for iconographical use, for instance Icon Class, were studied, in order to decide whether these could be used or adapted to Asian archaeological subjects or not.

The requirements of the potential users of the data base are twofold. On the one hand, a system for the registration of factual data of the photographs is necessary, and on the other hand more detailed documentation, resembling the scanning with words of the images on the photographs, is required. For the first requirement the PICA system in use by the Library would have been sufficient, but for the second one many more detailed data are necessary, which can not be provided by PICA. Icon Class, used by the Art History Department, also did not provide sufficient space for our requirements. Therefore, it was decided to design a new data base, part of which can be converted into PICA for the benefit of the library personnel who have to take the photographs out of the stacks, and for the user's quick acquaintance with a particular object or monument he is looking for.

The data of the first category are:

- *registration number* given to the photographs by the 'Archaeological Survey'.

These numbers are important, because in older and more recent literature reference is made to them.

- *new registration number* of the University Library. The whole collection 'Archaeological Survey' photographs received one registration number (Or. 22.308). Other photo collections (Indonesia, Middle East, India, Mainland SE Asia) can be added to the data base and will receive a different Or. number.

- *location number*, which means the specific number given to the box in which the photographs are stored.

- *reproduction number*, which means the registration number of the (new) negative and the number of the box in which the negative is stored.

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- *reprotype*, referring to the type of reproduction: 'photograph' or 'slide', and to 'black and white' or 'colour'.

- *photographer*, when the name of the photographer is known.

- *date photograph*, referring to the year, and if known, the month in which the original photograph was taken.

- *collection*, in case of a photograph taken from an item in a museum or a private collection. The name and location (country, town) of the museum is mentioned, and the name of the private owner.

- *collection number*, in case the photograph is taken from an item in a museum, the registration number of the item in the collection is mentioned, if there is any. It was decided to use the old numbers of the objects of the Batavian Museum, because reference is made to these numbers in literature. In many cases new numbers have not yet been given. As far as the Museum Sonobudoyo in Yogyakarta was concerned, it appeared that Old Javanese inscriptions on copper plates have not yet received a number. The same holds good for private collections and loans. In some cases private collections, for instance the Domela Nieuwenhuis Collection of Hindu Javanese bronzes, have been sold at auctions. If possible, such data are mentioned, and reference is made to the sales catalogues.

- *origin*, referring to the name of the Institute or private owner of the original photograph from which the new reproduction was taken. In some cases new negatives and prints were taken from originals in the Royal Tropical Institute in Amsterdam, from the Royal Institute for Linguistics and Anthropology in Leiden, or from private collectors.

This reference is important in connection with copy rights in case prints are used for publications or commercial activities. The proper credits can be given or reproduction rights can be paid.

- *repro in*, here the standard scientific literature has to be given in which the photograph is reproduced. This means the Archaeological Reports and the Publications of the

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Archaeological Survey (Berita Dinas Purbakala, Oudheidkundige Verslagen *OV*, Publicaties

Oudheidkundige Dienst *POD*, Rapporten Oudheidkun'ige Commissie *ROC*, Rapporten

Oudheidkundige Dienst *ROD*), the handbook by N.J. Krom (Introduction to Hindu-Javanese

Art), Stutterheim's Antiquities of Bali and Bernet Kemper's Ancient Indonesian Art. In a

later stadium reproductions in other, modern publications and articles should be mentioned.

- archaeological and geographical locations

Another set of data concerning the geographical location of the monuments in the

photographs is also required, but this provides more problems than one would expect. In the

course of time the names of the villages, the districts and provinces in which they are located,

have changed. It has happened that a particular monument has received a new name after the

Independence of Indonesia. This means, that in the older literature, in particular the scientific

'Oudheidkundige Verslagen' and 'Oudheidkundige Rapporten' (Archaeological Reports), a

particular temple has a particular name, for instance Candi Kali Bening, whereas it is now

called Candi Kalasan, and Loro Jonggrang, which is now called Prambanan. Therefore, it

was decided to create two fields, one giving the old names and one the most recent ones. In

order to collect the proper data on geography, atlases of the Bureau of Statistics in Jakarta

and Postal Codes Books were obtained and used. This resulted in the following fields:

- *ioc arch*, which means that the names of the sites or buildings as they occur in the older

scientific literature are given.

- *loc geog*, which means, that the recent names are given. The order is: village (*desa*),

subdistrict (*kecamatan*), district or regency (*kabupaten*), province (*propinsi*) and island. If

the larger islands are concerned, like Sumatra and Java, west, central, east, etc. are added.

Moreover this category contains two fields for internal use, namely:

- *missing*; some photographs of antiquities and a whole group of photographs of colonial

furniture are missing or have not yet been traced. However, there are prints of these numbers

in Jakarta and Amsterdam. Special arrangements have to be made to copy these photographs.

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From time to time it also happens that copies of prints, often containing 'missing' photographs, are discovered in private collections. The intention is to begin the copying of the photographs which are 'missing' when the copying of the other, easily available ones, has been finished.

-qualification; the quality of the old prints from v. .ich the copies are made is mentioned: good, bad, out of focus. If possible, instead of the photographs in the Leiden collection which are in a bad condition, better ones from another collection will be used for the making of new negatives.

It is self-evident that these two fields will not be converted into PICA in a later stadium of the project.

The fields of the data base which serve documentary purposes are much more complicated. The question should be asked what a student and a lecturer and a researcher want and need to know in order to use the collection in an efficient way.

Two basic questions are: what exactly is depicted and where does one find a description of the photograph, of the monument or the object depicted on it? This is even more important, because a proper Bibliography of Indonesian Archaeology does not yet exist.

And, if statues or monuments are involved: what is their size and height? Which side (northern, eastern, southern, western) is depicted? What is the condition of the object or monument at the moment the photograph was taken, and in what condition is it now?

For research the more detailed questions of a student or researcher have to be solved, for instance. where can I find depictions of ascetics, of a particular type of jewellery, of a particular ornament, headdress, animal, plant, relief series? And: what are these details called, and in which language?

Finally, how quickly and easily can one find these statues, objects of material culture or monuments of a particular type and the details depicted on them?

This leads to a different type of data base that can only be made when sufficient

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infrastructure exists. However, due to World War II, the Indonesian Revolution and the Independence of Indonesia, the Dutch archaeologists had to interrupt their studies of Indonesian archaeology for almost 20 years and the Indonesian archaeologists had no opportunity to provide an infrastructure, because they were mainly involved in restauration and conservation activities.

In order to describe the items depicted on the photographs properly and in some detail, the following steps were taken:

- *groundplans* of monuments in Java, Bali, Sumatra were collected in Indonesia and Holland, and if not available, they were made *in situ*.

- the *ornaments* carved on Javanese and Sumatran temples from the Hindu-Buddhist period and the early Islamic period (8th - 16th centuries) were collected from the photographs, drawn on paper, and classified. Afterwards the drawings were put in order, per class, in small books. This means that there is a book with drawings of garlands, of flowers, of birds, animals, lotusses, ogres' heads, etc. Each drawing is provided with the name of the monument from which it is copied, and the number of the photograph of the Archaeological Survey. The name of the ornament, in Sanskrit, Old Javanese, Balinese, Dutch and English is added. If possible, an Indonesian name has been added as well.

- *drawings of profiles* of temples and monuments were collected, sorted out and put into another book.

- a *thesaurus* was made in collaboration with a specialist on thesauri from the Royal Institute of Linguistics and Anthropology, Mr. H. Kemp. This thesaurus contains at present 1500 terms regarding architecture, sculpture, religion, ornamentation, objects of material culture, jewellery, musical instruments, names of goos, animals, plants and offerings.

In compiling this thesaurus many language difficulties, which had to be solved, were encountered. Technical terms for ornaments, architectural categories, musical instruments, objects of Indian origin that were encountered in and depicted on the 8th-15th century Hindu

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and Buddhist monuments in Java and Sumatra, are unknown to us, since they have not been described and mentioned in written Javanese and Sumatran sources from these periods. However, in Indian classical literature and handbooks on architecture (Vastuvidya, Vastusastra), terms exist for them in Sanskrit. In scientific literature on the Indonesian monuments and material culture from the abovementioned period, the technical terms in Sanskrit, known from Indian sources, always are used. Therefore, we decided to use these terms in the thesaurus and data base as well. Their English translations were added, based on the Iconographic Dictionary of the Indian Religions by G. Liebert (Brill, 1976). Another problem was the fact that there are not yet Indonesian words for many of these technical terms. Loanwords from Dutch, English or other languages are used. Cooperation with the 'Language Survey' (Pusat Bahasa) of Indonesia is required to design Indonesian terms. This will be done in due time.

One could ask whether all these documentation efforts are a waste of time, so much work simply for a data base, but it appears that the data collected are very useful for training programmes of students in Indonesian Archaeology and that it is possible to compile Illustrated Iconographic dictionaries with this material as well.

The abovementioned infrastructure resulted in the following fields of the data base:

- *subject*, in which the image on the photograph is scanned with words and technical terms

- *side, direction* of the monument or object in question

- *height, size* of the monument or object in question

- *literature reference*, in which reference is given to the description of the object or monument in literature, by which the standard literature and articles are meant.

- *notes*, in which the item is described and other, useful information about the subject and its details may be given as well.

Search Operations

At the end of the project, the data base will be made 'user friendly'. This means that part of

the information will be converted into PICA so that potential users can be informed about the existence of photographs of particular monuments, statues, etc. in the various University buildings and libraries in Leiden and elsewhere that have access to the PICA system. In this way a potential user has a list of the numbers of the photographs he may need. For more detailed information, he may go to the Oriental Department of the University Library to fill in a form in which he requests the photographs he needs. in the same way as the Oriental Manuscripts of that department can be obtained. He may study the photographs in the Manuscript Room of the department, and if necessary, consult the detailed data base which is stored in the computer of the department. If required, he can make a print of these data. The handbooks, the Archaeological Reports, and the majority of the journals containing articles on archaeology referred to in the data base are placed in the open stacks of the Manuscript Room and the adjacent Study Room.

Plans for the Future

At a later phase it is the intention to add other archaeological photo collections, not only from Southeast Asia, but also from South Asia kept in The Netherlands.

Leiden, May/June 1992

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Division: SPECIAL LIBRARIES

Section/RT: ART LIBRARIES

Joint Meeting with:

76-ART (WS)-3-E

WORKSHOP THEME (IF APPLICABLE): Collection Development and
Acquisition of Art Materials with special reference
to South and South East Asia

The Collection Development and Organisation of
Art Materials: The Cultural Center of the
Philippines in Context

by

Elizabeth R. Peralejo
Library Director
Cultural Center of the Philippines

For internal use only: (WS)

Meeting No: 135

SI: yes/no

Estimated number of participants
in the meeting: 50

The Collection Development and Organization of Art Materials : The Cultural Center of the Philippines in Context

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Abstract : This paper will focus on a national repository on arts
and culture in a developing country, the Library of the
Cultural Center of the Philippines. It will present a
brief historical background on how the CCP Library and
its collection started, evolved and developed. It will
give a glimpse on how the Library functions toward the
realization of the Center's goals and objectives.
Furthermore, it will discuss the procedure on how the
various types of materials are organized and
disseminated to the clientele. In the process of the
presentation, some problems which affect the Library's
goals and activities will likewise be shared.

I. INTRODUCTION

The Cultural Center of the Philippines is a government institution mandated to preserve, promote and enhance the Filipino people's cultural heritage. It realizes the fact that crucial to our development as a nation is the assertion of a national identity. Only a people who understands and takes pride in its cultural heritage can develop an economy and a government that can hold its own in the community of free and independent nations. As such, it envisions a Filipino national culture evolving with and for the people.

In pursuit of its vision, the CCP has for its objectives the following : to encourage the creation of original Filipino works ; to promote artistic activities all over the country ; to increase critical awareness and support of cultural activities among various publics ; to foster artistic excellence among artists; and to increase understanding of the various cultures in the country among Filipinos and the rest of the world.

Based on the abovementioned objectives, the CCP does not only serve as a national venue for the performing arts but also as a coordinating center for artistic and cultural programs and activities throughout the country. mainly through the local arts councils which it helps to organize. In these art councils, local artists of a particular city, province or region plan and implement their own cultural programs.

The Library of the Cultural Center of the Philippines serves as a national repository of Filipiniana and foreign materials not only on arts and culture but on the humanities in general. It functions as a reference and a research library not only for CCP employees, artists and scholars interested to do research on Philippine culture but for the general public as well.

Filipiniana materials refer to those print and non-print materials about the Philippines, authored by Filipinos and/or published in the Philippines. Humanities, on the other hand, includes the fields of philosophy, religion, linguistics and philology, literature, drama, music, fine arts as well as applied arts.

In support of the vision, mission and objectives of the Center, the Library aims :

1. to acquire, organize, disseminate, promote and preserve works of Filipino artists regardless of ideology and cultural background ;

2. to provide bibliographic guides to the collection and produce a location tool for all available resources on Philippine culture scattered in various institutions in the country ;

3. to extend library services to the regions through the holding of seminar-workshops among librarians and cultural workers as well as through roving mini-libraries ;

4. to establish linkages and networks with libraries, schools, cultural institutions and government agencies in the regions ;

5. to gain an understanding and appreciation of world cultures and to create linkages with international bodies and institutions that would provide exchanges of materials and ideas.

The CCP Library was envisioned as a special research library with a non-circulating collection on the performing arts. Although established as part of the CCP complex in 1969, it became operational only in 1972, three years after the Center formally opened to the public. This was due to the fact that there was no collection yet to begin with. The first Library Director had to solicit donations from private individuals and institutions since funding then was very limited.

The nucleus of the collection was the forty (40) or so art books donated by Asia Foundation in 1970. A similar gesture was made by Ford Foundation which donated a certain amount which was used to purchase selected titles among publications by and about Filipinos in the humanities and social sciences. Then, a good number of books on world culture, serials, pamphlets and non-print materials were donated by foreign governments represented in the Philippines during that time. This build-up of collection expanded the original intent to specialize in the performing arts to a widened scope in the humanities.

Today, the CCP Library is an excellent reference library with adequate facilities for reading, viewing and listening. It has a Filipiniana Section, a World Culture Section, a Periodical Section and a Special Collection Section which houses the donations of famous artists and private collectors. It also has an archives of manuscripts (i.e. personal papers of famous artists, writing grants, literary entries to all CCP competitions, young composers' entries to composition contests)

and musical scores (i.e. piano vocal, orchestral, national anthem, commissioned works on Philippine music and foreign compositions).

The Audiovisual Section, on the other hand, contains a wide collection of slides, photographs, maps, posters, phono records, audio tapes which includes oral history and video tapes of CCP performances. There has been a tremendous increase in terms of non-print collection starting in the late 80´s when all CCP departments / divisions were directed to turn-over their productions to the Library for safekeeping, preservation and dissemination. All these make the CCP Library collection one of the best in the country today.

From a non-circulating collection, the Library now allows CCP employees on permanent status to borrow as many as five (5) materials at a time. The others are allowed to use the materials within the Library only and are required to secure a membership card to be able to use the resources and facilities. This card is valid for one year and is non-transferable.

The Library adopts an "open shelf" policy for books and periodicals with certain restrictions on the use of archival, special and non-print collections. Access to these materials are made upon request and under the supervision of the librarian in-charge of the Section. However, due to the limitation of space and facilities, researchers are allowed to bring the materials to the general reading area thus, exposing them to certain risks such as mutilation, misplacement and loss.

IV. COLLECTION DEVELOPMENT

Collection development is a phase which need no explanation except that it should be taken in its broadest sense, that is, as the process of selecting, acquiring and evaluating the strenghts and weaknesses of the collection. At the CCP Library, this is done systematically to intensify the total Library holdings.

A. Selection

The responsibility for selecting materials rests with the acquisition librarian but the final decision lies on the Library Director. Selection is being done following certain policies and guidelines in accordance with the objectives of the CCP and of the Library.

In the process of selection, the acquisition librarian consults bibliographies and book reviews found in magazines, newspapers and outside sources; examines stocks regularly sent by local book dealers or publishers; visits book sales and exhibits; and attends book launchings. But this is only as far as published materials are concerned. When it comes to unpublished materials, particularly those in the provinces, we rely mostly from recommendation of scholars and researchers as well as from linkages with individuals and institutions. That is why there is a felt need for a centralized data bank, especially in the area of cultural researches done by and among the various ethnic groups in the country.

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The process of acquiring materials for the Library's collection is being done through purchase, subscription, gift, donation, exchange and deposit. In certain instances, rare collections of famous artists and/or private collectors are being borrowed for photoduplication or dubbing.

1. Purchase and Subscription

The Library purchase its Filipiniana and foreign books from local dealers and distributors but funds allotted for this purpose is very limited to enable us to update our reference materials and buy expensive scholarly publications There is also no provision for rare materials being sold in the market. Furthermore, government restrictions inhibit us to indent foreign books and non-print materials.

Aside from those already mentioned, another problem concerns subscription of foreign periodicals. Most of the time, magazines or journals arrive very late or not at all. This results to a lot of problems for the acquisition librarian who does the follow-up, both with the publisher or at the Post Office. To minimize this problem, we recommended the hiring of a jobber who will do the subscribing for us, pay the foreign publishers in dollar, get the magazines from the Post Office and deliver them to the Library.

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2. Gift/Donation

Through the linkages established by the Library with various artists, private collectors, libraries, schools and other institutions, including government and non-government organizations, a sizeable number of materials are being acquired. Among the significant acquisitions are musical scores, librettos, literary manuscripts, photographs and memorabilias of famous personalities such as National Artist for Music Lucrecia Kasilag, internationally renowned soprano Dalisay Aldaba, record producer and song lyricist Manuel Villar and the late film/TV director Lino Brocka.

Our problem with regard to donations is the lack of space and facilities to put them. At present, the room allotted for special collections is getting smaller and too cramped for comfort. Unless the proposed library expansion plan will be approved and started by next year as projected, there will be no more room for expansion. Due to this space problem, some of the donated materials are temporarily placed in boxes, thus making them unaccessible to researchers.

3. Exchange

Another source of materials for the Library is the exchange agreements with various academic/cultural institutions, both local and foreign, where it gets some of its scholarly journals. Added to this is the cultural agreements entered into

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by the Philippines with other countries. To this date, we have been exchanging materials with Australia, Austria, Belgium, Cuba, Canada, Denmark, India, Indonesia, Malaysia, Mexico, People's Republic of China, Republic of China, Sweden, the United States and the USSR.

The problems with exchange agreements, both local and foreign, are that the materials are very irregular and that some journals have already ceased publications. These may be due to a defective postal system, unreasonable taxes or high cost of freight rates, not to mention the high cost of printing nowadays. With regard to the foreign materials we receive, our problem is that a number of them are in the language or text of the donor country. Since these could not be understood by most of our users they are not being used and simply occupy needed space. Therefore it is recommended that for future cultural agreements with other countries, only publications written in English or with English translation will be included in the exchange.

4. Deposit

When the Library became the repository of all materials documented, produced and published by the other CCF departments/divisions, the holdings increased a great deal, especially in the area of non-print. This heavy influx of materials entails two types of problems : space and staff. There is only a little space left to accommodate the increasing collection and we lack the personnel to organize them, not to

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mention the staff to attend to the increased number of viewing, listening and dubbing requests. Due to these limitations, some of the departments have been advised not to turn over their materials yet until we find the space to put them. Furthermore, we have already made recommendation for the hiring of one full time professional librarian to assist in the organization of collection and for an additional clerk to assist in the AV .

V. ORGANIZATION OF COLLECTION

At the CCP Library, printed materials are classified according to the Library of Congress classification scheme. Non-print materials, on the other hand, are classified according to type or format and provided with letter symbols as media code and accession numbers. As for descriptive cataloging, the Library adopts the revised edition of Anglo-American Cataloging Rules (AACR 2) both for print and non-print collections.

The Library of Congress classification scheme we have been adopting is already an expanded or modified version. In the early 30s, a group of university librarians was assigned to expand the LC provisions, particularly the literature, language, geographic location and historical period under " Philippine Languages and Literature " (5501-6184). This project was sponsored by the Philippine Library Association, Inc. (FLAI) in coordination with the Philippine Association of Academic and Research Librarians (PAARL). This expanded version is now adopted by almost all academic and research libraries throughout the country, including the CCP Library.

9.

With regard to non-print materials, the accession number system has been adopted instead of the subject classification system. The main advantage of this system is the simplicity in assigning call numbers. Since we lack a cataloger, this simple routine task involves no judgment and saves professional time. Therefore, materials are made available for use before full cataloging is completed. Likewise, new materials are added to the collection without any rearranging. This is important since housing of our non-print materials is fixed and interfiling or shifting will be difficult due to the limited space.

At present, our non-print collection is increasing. Because of this, problems are beginning to crop up with the kind of system we are using. First, the chronological numbering shows no relationship between the assigned number and the subject of the material, thereby necessitating the use of the card catalog to locate specific items by subject. Second, items in each medium on the same subject can not be housed together. Third, there is the problem on locating duplicate copies. And finally, there is no uniformity in the Union Card Catalog which sometimes results to confusion among the users.

Since the Library is currently understaffed, non-print materials will continue to be classified according to the ccession number system. But eventually, plans are underway for the classification and cataloging of these materials according to LC and AACR 2 respectively. Provisions have already been made in the budget for an additional cataloger and supplies.

VI. DISSEMINATION OF COLLECTION

The collection of the CCP Library is open to the public. it being a government institution. But due to the limitation of space and facilities. around fifty (50) clientele can only be accommodated at a time. Nevertheless. we see to it that anyone who needs to make a research on culture and the arts will have the chance to use the collection. The following are the services being provided to them :

1. Reference Service

Assistance comes in the form of information from the card catalog. search through books, periodicals. archival and even non-print materials. For inquiries or research on collection not available at the library. referrals are made to specific libraries where the materials may be found.

2. Bibliographic Service

List of books and audio-visual materials as well as indexes. to periodical articles are provided to help in locating materials on specific topics of interest that are available in the Library. Besides these special bibliographies, the Library has produced the Union Catalogs on Philippine Culture - a series of catalogs of monographs. periodical articles. theses and dissertations on the seven arts in the Philippines (i.e. music, dance. theater, film, visual arts and architecture, literature, broadcast media) that are found in various libraries throughout the country.

3. Exhibits and Displays

Exhibits and displays are put up regularly at the near

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entrance of the Library. These range from a monthly display of new acquisitions to exhibit of books and other printed materials in commemmoration of a particular artist or celebration. Likewise materials coming from various embassies or individual donors are exhibited in recognition of donations made.

4. Viewing and Listening Service

The Library provides facilities for viewing projected materials and listening to records and tapes on a "first-come-first-served" basis. Arrangements are made with the AV librarian regarding the date and time of viewing and listening activities.

5. Dubbing/Taping Service

Since the AV Section has a complete stereo and video facilities. requests for dubbing (from tape to tape) and taping .from record to tape) coming from CCP personnel and outsiders are accepted. However, request for dubbing of complete CCP performances are strictly prohibited: only excerpts are allowed to be dubbed.

6. Photocopying Service

Printed/published materials can be photocopied for a fee but due to the limits of copyright and the lack of personnel, it should not exceed one third (1/3) of the size of any book.

7. Photo/video taking

Users who need pictures for their research, thesis, production and the like are allowed to take photo and/ video shots from published materials and photograph collection upon oresentation of a written request signed by the head of the institution responsible for such project.

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VII. CONCLUSION

Inspite of all the problems and limitations, efforts are being exerted to meet and satisfy the requirements of a national repository on arts and culture. The Library staff, with the support of the CCP management , continue on finding ways to develop and organize the collection. However, for a more improved and effective collection and services, the following programs and projects are envisioned :

1. computerized organization of collection, specifically in the area of cataloging, bibliography-making and indexing ;

2. computerized data bank of resources, information on arts and culture and cultural researches done in the country

3. microfilming of rare and valuable collection of the Library for preservation and posterity ;

4. documentation of the oral history collection on cassette and reel tapes for fuller utilization ;

5. more active and vigorous networking with other cultural repositories in the Philippines and in other countries;

6. strict compliance and implementation of the government legal deposit decree on art materials and other cultural resources.

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APPENDIX A

CULTURAL RESOURCES OF CCP

Print Publications :

1. Union Catalogs on Philippine Culture - a series of catalogs of printed Filipiniana materials on Music (3 vols.), Dance (1vol.), Theater (2 vols.), Film (1 vol.), Visual Arts and Architecture (1 vol.), Literature (2 pts.-2 vols.) and Broadcast Media (1 vol.) available in various libraries and other cultural repositories in the country.

2. 3 Filipino Figurative Expressionists - features the works of three well-known expressionists- Ang Kiukok, Onib Olmedo and Solomon Saprid.

3. Himalay - a trilingual (Filipino, English and Spanish) compilation of the best critical essays on poet laureate Francisco Baltazar.A bicentennial tribute to one of the country's greatest poets who is best known for his metrical romance in verse "Florante at Laura".

4. Turtle Voices in Uncertain Weather - a posthumous collection of the works of one of the best Filipino poet, fictionist, and novelist Alfredo Navarro Salanga.

5. Kamao I,II,III - a three-volume anthology of protest literature, an enduring collection of poetry, drama and fiction that chronicles one of the most trying periods in Philippine history.

6. Subli - provides a study on Subli, a traditional performance art and a devotion performed in honour of the Mahal Poong Santa Krus - the patron of many towns in Batangas (one of the provinces in Southern Philippines).

7. Diwa: Buhay, Ritwal at Sining - describes the conceptual context of the CCP's Museum of Philippine Culture.

8. Conversations on Philippine Art - an in-depth dialogue with well-known Filipino artists on their art in their most unprepossessing moods.

9. Botong: Alay at Ala-ala = brings to fore the life and art of the National Artist Carlos V. Francisco.

10. Tatlong Sanaysay - a collection of three essays which accompanied the exhibition "Pansariling Likha"

(Art in Private Spaces) held on July 13 to
Sept. 18. 1988. The essays discuss the influences
affecting the artists who participated in the
exhibit as reflected in their art works.

11. **The Graphics Works of Ofelia Gelvezon-Tequi** =
a monograph of her exhibit held at CCP.

12. **Ang Buhay at Musika ni Maestro Nicanor Abelardo** -
a biography of the famous musician Nicanor
Abelardo.

13. **Tuklas Sining (Seven Arts Monographs)** - essays on the
seven arts and the evolution of these various art
forms from pre-Spanish period to the present.

14. **Dalena, A Survey of His Works** - a survey of the works of
Filipino artist. Danilo Dalena, whose characteristic
style has managed to provide an analytical framework
in defining the Filipino psyche.

15. **Beddeng : Exploring the Igorot-Ilokano Confluence** -
a monograph of the exhibit which shows the
cultural ties between the Igorots and the Ilokanos.

16. **Handurawan** - an anthology of poetry of the CCP
Literature grantees for 1982 - 1985.

17. **Contemporary Philippine Art** - a detailed history of the
Philippine contemporary art.

18. **Kultura** - a quarterly magazine which is devoted to
reviews, events and critiques in the local art and
cultural scene.

19. **Ani** - a quarterly journal which highlights contemporary
creative and critical writings in Filipino and
major Philippine languages. One of the very few
and select professional journals in the country
today.

20. **Artista ng Bayan** - an annual folio on the awardees of
the Gawad Artista ng Bayan (National Artist Award)-
the highest recognition given to Filipinos who
have made distinct contributions to arts and
letters. Includes the criteria in selecting the
winners, citations, lists of awards and
outstanding works of the artists.

21. **Gawad CCP Para sa Sining** - an annual folio on the
awardees of the Gawad CCP Para sa Sining (CCP
Award for the Arts). a national award of recogni-
tion given to Filipinos who have made outstanding
contributions to their particular art form or
field.

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Video Documentations :

1. **Tuklas Sining** - a series of video documentaries chronicling the evolution of various art forms in the Philippines from pre-Spanish period to the present. Available in Filipino, English and Spanish and accompanied by complementary mono-graphs.

2. **Portraits of the Filipino Artists** - video documentaries on Filipino artists, their works, achievements and contributions to the development of Philippine art and culture.

3. **Special Series** - documentaries on the production master-pieces of CCP resident companies.

4. Mini-documentaries on Philippine rituals, festivals, cultural events, practices and fast-dying traditions.

5. Coverage of various CCP-sponsored art festivals and other activities.

Radio Programs :

1. **Kultura ng Bayan** - features "balagtasan" (a Philippine traditional debate in verse discussing contemporary issues), a cultural arts bulletin and a State-of-the-Arts portion which features major Filipino artists or group of artists and the current state of Philippine art and culture.

Audio-visual Presentations :

1. **Artista ng Bayan** - a soundslide presentation on the awardees of the Gawad Artista ng Bayan (National Artist Award).

2. **Gawad CCP Para sa Sining** - a soundslide presentation on the awardees of the the Gawad CCP Para sa Sining (CCP Award for the Arts).

A Modification and Expansion of the Library of Congress Classification System

PHILIPPINE LANGUAGES AND LITERATURE

PL 5501 - 5529		Philippines
	5508	Script. writing. Alphabet.

5530 - 5548		Philippine literature ** (General)

Includes Philippine literature in more than one Philippine language. Class literature of one Philippine language or dialect with specific literature, e.g. Ilo, and literature, class in PL 5751 - 5754.

History and criticism

5530	Periodicals. Societies. Collections.
5531	Dictionaries. Encyclopedias. Indexes.
5532	General works. Compends. Study and teaching.
5533	General special. Minor works.
5534	Biography Collective

For individual biographies, see PL 5540 - 5547

By period

5535	Early to 18th century
5536	19th century
5537	20th century

By form

5538.2	Poetry
5538.3	Drama
5538.4	Fiction
5539	Collections (General)

Class here collection of Philippine literature in more than one Philippine languages.

Individual authors

Under each period :

5540	Early to 18th century, A-Z
5541	19th century. A-Z
5542 - 5548	20th century. A-Z
5550 - 5997	Special languages. A-Z

** Works written by either natural born or naturalized Filipinos, by permanent residents of the Philippines or well-known.

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6000 - 6015	Filipino language and literature Includes Filipino linguistic studies and Filipino and Tagalog literature. For Tagalog linguistic studies, use PL 6051 - 6059.
	Filipino language (Filipino linguistic studies)
6000	Periodicals. Societies. Collections Addresses. essays. etc.
6002	Grammar, etc. Includes textbook, exercises and readers.
6003	Lexicography (General)
6004	Filipino into foreign languages. A-Z
6005 - 6015	Filipino literature (Filipino and Tagalog literature)
6006	Study and teaching. History and criticism.
6007	By period
6008	By form
6009	Collection (General)
6010 - 6115	Translations from Filipino into other languages (Collection). By language or dialect. A-Z.
6151 - 6059	Tagalog Tagalog linguistic studies)
6165 - 6174	Philippine literature in English History and criticism.
6165	Societies. congresses, etc.
6166	Collections. Addresses.essays. lectures.
6167	General works.
6168	General special, e.g. Study and teaching, etc.
6169	Collective biography.
6170	By period
6171	By form
6172	Collection.
6175 - 6184	Philippine literature in Spanish Divide like PL 6165 - 6174, except the following :
6180	By period
.2	16th century
.3	17th century
.4	18th century
.5	19th century
.6	20th century
	For individual authors, use PL 5540 - 5547.
Appendix	Twentieth century authors.

Division: SPECIAL LIBRARIES

Section/RT: ART LIBRARIES

104-ART-5(WS)-E

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE): Collection Development and
Acquisition of Art Materials with special reference to
South and South East Asia

Resources for the Conservation of
Southeast Asian Art

By

Susan G. Swartzburg
Assistant Librarian for Collection Management
Rutgers University Libraries
Alexander Library
New Brunswick, NJ

For internal use only:

Meeting No: 135

SI: yes/no

Estimated number of participants
in the meeting:

RESOURCES FOR THE CONSERVATION OF SOUTHEAST ASIAN ART

Susan G. Swartzburg

Assistant Librarian for Collection Management

Rutgers University Libraries

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New Brunswick, NJ   08903   USA

Introduction

I share the American fascination with Asia, its ancient
culture, and the monuments of that culture. This is my first,
but it will not be my last, visit to India. The opportunity to
see the ancient cities and monuments of the region is an
experience that I shall never forget.

The monuments of Southeast Asian art - temples, sculpture,
paintings, manuscripts - are among the great treasures of the
world. Indeed, they help us understand who we are and where we
come from. However, because of the rigors of the climate of
southern Asia, these cultural treasures need special care and
attention to ensure their preservation for future generations.
In addition to the climate, war and political unrest in Southeast
Asia during this century have placed some of the world's greatest
cultural monuments at risk. The conflicts in Vietnam, Laos, and
Cambodia in recent years, and now in Burma and Thailand,

dramatically have made the world aware of the enormous loss to our cultural heritage that occurs at times of conflict and war. As I speak, some of the Western world's great cultural monuments are being destroyed as ethnic hatred ravages the former country of Yugoslavia.

It is essential that assistance, both financial and in personnel, be provided to ensure the preservation of Southeast Asia's cultural heritage. In addition to professional expertise in conservation and financial assistance, which is critical for a successful preservation effort, there is also a need for further training for conservators and conservation technicians who will work in Southeast Asia. I will discuss initiatives that are presently underway to provide support and assistance in the region and describe the agencies that can provide financial and technical assistance.

The Problem

While he was serving in Vietnam with the American forces, my brother, an architectural historian, photographed the resort city of Delat, with its wonderful architecture, a combination of the best of French and Indo-Chinese design. His fear was that the city would be demolished by warfare. Miraculously, it has survived and slowly these houses are being restored to their original elegance. Because of his great concern for the Anghor temple complex in Cambodia, acknowledged to be one of the great

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cultural monuments of the world, my brother and a colleague. a specialist in Southeast Asia, attempted to get there to photograph it, as well, but were unable to do so. For years, they worried that Anghor Wat and the surrounding structures would be destroyed during the destructive rampage of the Khmer Rouge. Because of the courage of individuals who understood the importance of the site for Cambodian culture, Anghor has survived. While some of the damage to the temples was willful, much of the deterioration occurred during the struggles in Cambodia, when the physical structure of the temples could not be maintained and the jungle took over. Slowly, painfully, and under the most difficult circumstances, Anghor Wat is being restored by Indian conservators, with support from UNESCO, and Cambodian workers. French conservators are working on other temples in the complex. Although some of the conservation treatments are controversial, the work has gained international support. Slowly, tourists are returning to view the complex and to marvel at Anghor Wat.

Because Cornell University, in the United States, has long collected the documentary records of Southeast Asia, it has taken a special interest in preserving Cambodia's documentary heritage. In 1989 the University, with funding from the Henry Luce Foundation and later the Christopher Reynolds Foundation, began a program to preserve some of the unique library and archival materials that had survived the horrors of the Khmer Rouge dictatorship. John Badgley, Curator of Cornell University

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Library's Collection on Southeast Asia; Judy Ledgerwood, a
graduate student and expert on Cambodian culture; and John Dean,
the University's Conservation Librarian, made a three week visit
to Cambodia to assess the country's conservation needs. In
addition to establishing a microfilming project, Dean began to
develop a plan to train Cambodian librarians to stabilize
deteriorating, endangered materials.

When Dean and his colleagues arrived in Cambodia, they were
stunned by the enormity of the task before them. Dean observed,
"What we saw was depressing. There was nothing to work with -
not even a knife or a pair of scissors." (Chepesiuk, 32) There
was no library system. There were no librarians. Only 350 Khmer
manuscripts survived in a badly damaged and deteriorating
National Library. The roof leaked; wiring was dangerous; insects
and birds made their way through screenless windows; vermin ate
much of the collection that survived the Khmer Rouge. (Ibid.)

Dean discovered that there was no conservation facility in
Cambodia that was capable of even the most rudimentary book and
paper repair. There were no supplies for conservation. Supplies
had to be sent in through Singapore so that Dean could work on
some of the damaged materials and begin to teach the library
staff the basics of preservation. He notes, "By the end of what
turned out to be a five-day group session, I had moved to a
supervisory role, and in the final two days before my departure,

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I was able to concentrate my efforts on the precious palm leaf manuscripts." (Chepesiuk, 32)

While the situation in Cambodia may be the extreme, John Dean's experience reflects the need for skilled conservators in Southeast Asia, the funds to provide them with the materials that they need to undertake conservation treatments, and, most of all, the need to ensure that conservators and conservation technicians are trained to continue the work. Dean is working to establish a regional center in Southeast Asia for such training. He understands that the conservation problems of the region require a regional approach, and treatment, in the final analysis, should be done by trained personnel of the region.

Consultants are working with the National Archives in the Philippines to develop a preservation and conservation program for those collections. Another colleague, John Townsend, of the New York Conservation and Preservation Program, has served as a consultant to the Indonesian National Library to help establish conservation and preservation programs in that country. The national librarian, who received her library degree from the University of Hawaii, is aware of the need to preserve her country's cultural patrimony.

IFLA has recently established Regional Conservation Centers in Japan, at the National Diet Library, Tokyo, and in Australia, at the National Library, Canberra, which can help address issues

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of treatment and training for the conservation of library and archival materials in the Pacific rim countries. These initiatives are to be encouraged and supported. It is my hope that the next time we meet in Asia, representatives from the countries in Southeast Asia will be able to report on their own programs to preserve their cultural heritage.

Sources of Support and Assistance

There are a number of agencies and institutions that are actively involved in the preservation of the world's cultural heritage. I have prepared a directory of these agencies, an updated version of the one that I originally prepared for our 1989 meeting in Paris, with special emphasis on the needs of Southeast Asia. I hope that each of you will take a copy of the list, with the accompanying bibliography. I will briefly describe the focus and the initiatives of some of these agencies and the services that they can provide.

First and foremost, institutions can turn for assistance to the United Nations Educational, Scientific and Cultural Organization (UNESCO), headquartered in Paris. UNESCO was established in 1946 "to contribute to the peace and security in the world by promoting collaboration among nations." Its projects and programs are intended to generate self-reliance in developing countries. Among UNESCO's priorities is support of world-wide efforts to preserve the cultural heritage. To instill

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in its member nations a sense of cultural and historic identity,
it conducts programs to further the study and the preservation of
cultural monuments of archaeological and artistic importance.
UNESCO has funded IFLA's surveys of preservation initiatives in
its member countries to facilitate the work of its Core Programme
in Preservation and Conservation. UNESCO publishes a quarterly
journal, Museum, which addresses issues in the preservation and
conservation of museum objects and museum management. It also
publishes, or co-publishes, reference books and bibliographies.
Its RAMP series of reports, which focus on issues of
organization, preservation, and conservation of library and
archival materials, will be of particular interest to this
audience. The late Indian conservator, Yash Pal Kathpalia, was
instrumental in establishing the RAMP series, and ensuring that
UNESCO addressed the concerns of Indian and other asian libraries
and archives. RAMP and other related reports are free of charge
from UNESCO headquarters in Paris.

The International Council on Monuments and Sites, ICOMOS, is
also located in Paris. Its concern is sites an monuments, such
as Anghor Wat. It works with UNESCO and other agencies to
provide technical and financial assistance for efforts to save
and preserve cultural sites and monuments. It also cooperates
with other agencies, some of which I shall mention in this talk,
to sponsor technical workshops and symposia.

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The International Centre for the Study of the Preservation
and the Restoration of Cultural Property, known as ICCROM, was
founded in 1959 to promote the preservation and conservation of
cultural property. It is located in Rome. ICCROM collects and
disseminates documentation concerning the scientific and
technical problems of conserving cultural property. It also
conducts advanced courses for conservators in a variety of
fields. It has offered several that have focused on problems
facing conservators from underdeveloped nations, and it
especially welcomes applicants from such countries for its
courses. ICCROM compiles and provides a list of opportunities
for further education and training in conservation around the
world, which is updated on a regular basis.

The International Council of Museums (ICOM), founded in
1946, is a professional organization dedicated to the improvement
and advancement of the world's museums. Its committees
coordinate a vast international effort directed toward the
continuing improvement of museums and their scientific,
educational, and professional roles. ICOM acts as a non-
governmental professional advisor to UNESCO, providing services
for technical assistance. It has an active Conservation
Division, which meets every three years to address important
issues of conservation and preservation, to review research in
conservation, and to further education and training. Its Working
Group on Education and Training in Conservation met in London in

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April to discuss and describe programs, courses, and curriculum
for the training of conservators and conservation technicians.

The Getty Conservation Institute, located in Marina del Rey,
California, is an operating program of the J. Paul Getty Trust.
It was created in 1982 to enhance the quality of conservation
practice in the world through a combination of in-house
activities and collaborative ventures with other organizations.
Its Scientific Research Program conducts basic and applied
research in conservation. Its Training Program sponsors
practical and theoretical training activities and professional
seminars around the world. In September 1991, with the U.S.
Information Agency and US/ICOMOS. the Getty Conservation
Institute sponsored a symposium on the conservation of cultural
property in Asia and the Pacific. This symposium brought
together policy makers and specialists to examine preservation
issues of the Asian Pacific Rim. The papers from the symposium
are to be published in the fall.

The Documentation Program of the Getty Conservation
Institute fosters the exchange of information through its
sponsorship and editorship of Art and Archaeology Technical
Abstracts (AATA), published twice a year, which provides
abstracts of recent publications covering all aspects of
conservation. It also supports the Conservation Information
Network, CIN, a computer database, organized by subject, of the
abstracts that have been, or will be, published in AATA. I

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believe that CIN is now available world-wide. The Getty
Conservation Institute publishes a quarterly newsletter,
Conservation, which reports on its activities. Its publications
program is increasingly extensive, issuing both technical and art
historical materials. After a slow start, the Getty, as we refer
to the Institute, is using its enormous financial resources to
play a significant role in the conservation of the world's
cultural heritage.

The International Institute for Conservation of Historic and
Artistic Works (IIC), founded in 1950, is concerned with the
universe of inanimate objects considered worthy of preservation:
sites, monuments, works of art, library and archival materials.
It is the professional organization for conservators. Through
its biennial congresses, participation in its regional groups,
its journal, Studies in Conservation, and its other publications,
some of which are cited in the bibliography, its members are able
to keep abreast of current developments in conservation. The IIC
originally had the responsibility for the editing and production
of AATA, which is now published through the Getty Conservation
Institute. Its members are the abstractors. A number of
countries have affiliate branches of the International Institute
for Conservation.

The International Association for Conservation of Books,
Paper and Archival Materials/International A beitsgemeinschaft
der Archiv-, Bibliotheks-, und Graphik Restoratoren, IADA, was

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founded in 1957 to address the professional needs of individuals

working in the field of document conservation. It organizes

courses and exchanges and publishes the quarterly journal,

Maltechnic Restauro.

The Institute of Paper Conservation (IPC) was established in

1987 as a specialist organization concerned with the conservation

of paper and related materials. Its purpose is to increase

awareness of the contemporary conservation situation by

coordinating the exchange of information and facilitating

contacts between its members. Its journal, The Paper

Conservator, is published annually and its newsletter, Paper

Conservation News, appears three times a year. The IPC holds

international conferences every five or six years. Its most

recent one was held in Manchester, England. in April. I want to

note that its current President, Simon Barcham Green, a paper

maker, has been visiting papermills in India during the past year

to assist in the development of the industry, with some emphasis

on papers for conservation. Barcham Green will be publishing

information about papermaking in India during the course of the

next year.

IFLA's Core Programme on Preservation and Conservation (PAC)

works closely with IFLA's Conservation Section to promote

preservation awareness around the world, to facilitate the

education and training of preservation specialists, conservators

and technicians, and to act as a source of information about

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preservation and conservation activities and initiatives. To date, the Conservation and Preservation Core Programme has established regional centers in Venezuela, France, Germany, Japan and Australia. The regional centers can undertake conservation treatments on library and archival materials. As they develop, they will also offer training opportunities and internships for conservators and technicians. The regional centers will foster cooperative initiatives and assist in obtaining the necessary financial support for such projects.

The International Council on Archives (ICA) has an active Conservation and Preservation Committee, established in 1976. Among its founders was the late Yash Pal Kathpalia, a distinguished conservator who was with the Indian National Archives. The ICA cooperates closely with IFLA. co-sponsoring a number of studies to identify conservation activities and conservation needs in member nations. The ICA will meet in Montreal, Canada, immediately following this meeting.

There are several organizations in the United States that are concerned with conservation issues in Southeast Asia. Abbey Publications is a non-profit organization which is the brainchild of an extraordinary individual, Ellen McCrady. McCrady began the Abbey Newsletter, and, later, the Alkaline Paper Advocate, two publications that focus on the preservation of library and archival materials. They have worldwide circulations. But the Abbey reaches beyond these publications. Its ultimate goal is to

disseminate news and information on preservation and conservation to an international community. McCrady is anxious to foster communication, a sharing of information, between countries and institutions in Asia and to encourage cooperative efforts to address preservation problems.

The Commission on Preservation and Access was created as a non-profit corporation to foster, develop, and support systematic and purposeful collaboration in order to ensure the preservation of the written record in all formats, and to provide equitable access to that information. It serves as a catalyst in my country to address an entire range of problems related to the preservation of our documentary heritage, and to provide access to such material. Its concern for preservation and access is international. The Commission intends to support international initiatives that will enrich not only the documentary heritage of the'United States, but also that of other nations. Its reports are free of charge and increasingly focus on issues of international concern.

The American Institute for the Conservation of Artistic and Historic Works (AIC) and the Canadian Group of the International Institute for Conservation (IIC-CG) focus, of course, on North American conservation concerns, but their members are involved in the international scene. The majority of the citizens of these North American countries have come from other countries around the world, bringing their cultures with them to enrich their new

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nations' culture. Thus, North American conservators are called upon to work on a wide variety of artifacts reflecting the cultural diversity of our region. Because of their expertise, these conservators frequently are called upon to offer assistance and expertise elsewhere around the world.

Conclusion

I have described, all too briefly, the international initiatives and sources of information and expertise in conservation that can be called upon for advice and assistance in Southeast Asia and elsewhere. As we meet, centers for information and training are being established in Southeast Asia.

The wars that have devastated Indo-China in the past decades have served to remind the world of the rich culture of the region and, as I have noted, attempts are underway to preserve what is left after the destruction, and to train the survivors to care for their heritage. I hope that my summary of agencies that support preservation and conservation initiatives will encourage and help those of you from the region who are in the audience, and inspire all of us to cooperate, people to people, nation to nation, to preserve the heritage that belongs to all of us.

I conclude by quoting my friend and colleague, Paul Himmelstein, painting conservator and current President of the American Institute for Conservation: "The preservation of

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humankind's creative output is an essential activity of a civilized society. Real objects preserved from our past allow us to view our history directly rather than through the indirect medium of someone else's words. They give us insight into our origins and the possibilities of human activity. It is through objects that previous generations may continue to live and influence our actions. Without knowledge of our shared past we cannot know ourselves or fully comprehend how our lives may affect the future."

Speaking as a conservator, he concludes, "Unless those of us who are privileged to work directly with art and historical objects take action to share our understanding of the importance of these objects with others in our society, we may see our efforts come to nought." Conservators, curators, cultural historians, librarians, archivists, are now and will continue to work together to ensure that our cultural heritage will be preserved. Each of us, art librarians from around the world, have an important part to play in the preservation of our cultural heritage, as documentalists and as the purveyors of the information so necessary to the preservers of our patrimony.

India. An ancient land, cradle of so much of our civilization. Enjoy, observe, preserve.

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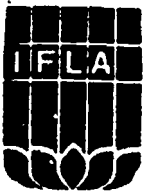
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IFLA GENERAL CONFERENCE NEW DELHI 1992

Division: SPECIAL LIBRARIES

Section/RT: ART LIBRARIES

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):Collection Development and
Acquisition of Art Materials with special reference to South
and South East Asia

112-ART(WS)-6-E

The Moravian mission and its research on the language and culture
of Western Tibet: a case study for collection development

by

Dr. Hartmut Walravens
Berlin State Library

The Moravian mission and its research on the language and culture of Western Tibet

Hartmut Walravens (Berlin State Library)

The Moravians, or *Evangelische Brüderunität*, as they are called in German, became an independant Christian group in 1727. Bohemian Brothers had fled the persecutions in their homeland and had settled down at Herrnhut in Upper Lusatia at the invitation of Count Zinzendorf, a pietist who later became a bishop of the Moravians himself. Already in 1732 the Moravaisn started their missionary activities which soon spread over the whole globe. The centre used to be Herrnhut which still is the major deposit of archival material, but owing to two world wars other centres of the Brethren like London and the Unites States (Bethlehem) gained importance.

At first the Moravians had no intention at all to evangelize Tibet or the adjoining mountainous areas. After the opening of China by Western powers (1842) a German missionary, Karl Friedrich August Gützlaff, had started a campaign to christianize China. Before his death in 1851 he travelled all over Europe to interest people in supporting the China missions and had a tremendous publicity. The Moravians also took part in the general enthusiasm but they did not want to compete with Gützlaff; so they decided to go to China from the other side by christianizing the Mongols. The Russian government, however, was not interested in foreign missionaries on their territory, which forced Wilhelm Heyde and Louis Pagell who had been selected to work among the Mongols in 1853, to try to reach their destination via India. But again they met with obstacles - they were not allowed to go farther than Lahoul, and so they stayed in Kyelang for a while and waited for an opportunity to go on.

This opportunity, however, never came, and so they settled down in Lahoul and took it as a command of heaven to evangelize the local population.

So far the story seems only to be an anecdote in the history of missions. The remarkable thing about the Moravian enterprise is, however, that sveral of the earlier misisonaries turned out to become outstanding researchers:

- August Wilhelm Heyde (1825-1907) was trained as a plumber; he learned some Kalmuk from H. A. Zwick in order to prepare for his future missionary work. He left for India in 1853, and only returned to Germany in 1903, after having revised the Tibetan translation of the New Testament. Among his further achievements are the revision of Sarat Chandra Das' Tibetan-English dictionary (Calcutta 1902) and the attempt to draw up a Bunan grammar. He was the first to write Bunan with Tibetan letters, and he contributed sections on Manchâṭi and Bunan to vol. III of the Linguistic Survey of India (Calcutta 1909).

- Heinrich August Jäschke (1817-1883) only stayed in Lahoul and India from 1856 to 1868. He was a gifted linguist: He wrote his diary in German, English, French, Latin, Greek, Danish, Polish and Swedish. He also had a command of Hebrew, Czech, and Hungarian, and some knowledge of Arabic, Persian and Sankrit. In 1856 he was called to Kyelang to become the superintendent of the little mission. Jäschke learned the Tibetan language and was soon fascinated by it. He got in contact with scholars like Lepsius in Berlin and Schiefner in St. Petersburg on Tibetan questions. In 1865 he published his Tibetan grammar (A short practical grammar of the Tibetan language) which is still in use among students of today. He published a sample translation from the 100,000 songs of Mi-la ras-pa, described the flora of Lahoul in the Journal of the Linnean Society, explained the Tibetan words in several travel accounts on Tibet, and finally published his famous Handwörterbuch der tibetischen Sprache[1]. While this was in German and reproduced from the author's manuscript it attracted the attention of the British Indian Government, and in 1881 an English translation was prepared «at the charge of the Secretary of State for India in Council». This Tibetan-English Dictionary became the favourite reference tool for Tibetan studies, and several generations of students. There were at least 8 reprints, the latest one done by Motilal Banarsidass in Delhi in 1978. The Tibetan grammar was also edited several times: the third edition (1929) was prepared by A. H. Francke and W.

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[1]Gnadau 1871-1876. 6,XX,671 pp. Review by E. Schlagintweit in Sitzungsberichte der Kgl. Bayerischen Akademie der Wissenschaften. Philos.-philolog. u. hist. Kl. 1875,II, 67-88.

Simon of the University of Berlin, the fourth (1954) by John L. Mish, a gifted orientalist who spent the 1930s in India.

Jäschke was truly a pioneer in Tibetan studies; a brief account of his life and activities are given in the *Tibet Journal* (8.1983:1, p.50-55).

Not the meanest among Jäschke's achievements was his creation of a Tibetan font. It has harmonious proportions, is easy to read and is used worldwide.[2]

- August Hermann Francke (1870-1930) was probably the most versatile of the Moravian Tibetologists. He was born in Gnadenfrei in Silesia where he also studied. Later on he became a teacher at the mission school for boys at Kleinwelka. In 1895 he went to England to prepare for missionary work. In April 1896 he departed for India and arrived at Leh at the beginning of June. In 1897 he married Anna Theodora Weiz, daughter of a Moravian missionary, who participated in her husband's Tibetan studies. In 1899 he was transferred to Khalatse where he stayed until 1904. The years 1904-1905 and 1908-1909 he spent in Germany owing to the poor health of his wife who could not get accustomed to the rough mountain climate. 1905 he returned to Khalatse from where he was tranferred to Kyelang in 1906. In this year he was appointed honorary member of the British & Foreign Bible Society. 1909-1910 he went on a research trip to the Western Tibetan border on invitation of the British-Indian Government, which resulted in two large volumes entitled *Antiquities of Indian Tibet*[3]. He returned to Germany in 1910 where he was commissioned to continue with the translation of the Bible into Tibetan.

In 1911 he was awarded an honorary Ph. D. by the University of Breslau. In 1914 the Bible Society sent Francke to Ladakh. The trip led him through Russia and Eastern Turkestan where he made archaeological collections commissioned by the Munich Museum of Ethnology[4]. Francke arrived at Leh on Sept. 10th, and was taken prisoner by the British on Oct. 4th. Until March, 1916 he spent in a POW camp at Ahmedagar where he learnt some more Sanskrit and Chinese from academic colleagues while he himself taught Tibetan. He was released in 1916 to

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[2]Cf. Johannes Schubert: Typographia Tibetana. *Gutenberg-Jahrbuch* 1950,280-298.
[3]Vol. 1: Calcutta 1914. XIV,133,IV pp. - Vol. 2: Calcutta 1926. VIII,310 pp. 4°
[4]See his report *Durch Zentralasien in die indische Gefangenschaft*. Herrnhut 1921. 172 pp.

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Germany where he was drafted immediately and sent to Romania as an interpreter for Indian POWs. He himself became a Serbian POW in 1918 and was again released in July, 1919. He was then awarded a research grant by the Göttingen Academy of Sciences to edit, translate and publish a Bon manuscript, gZer-myig, of the Prussian State Library in Berlin. Altogether one third of this voluminous work was printed in original text and translation in the journal *Asia Major* before Francke passed away in 1930. In 1922 he took his «Habilitation» in Berlin, which permitted him to teach at this university. During the following years as professor extraordinary he continued his work on the Tibetan Bible translation in cooperation with the Tibetan minister Yoseb Gergan. He also turned to the Turfan finds which made Berlin one of the major centres of Central Asian studies at the time and deciphered and published some of the Tibetan texts[5]. Among his colleagues were F. W. K. Müller and Albert von Lecoq. Among his students were Ernst Waldschmidt, Walter Simon (†1981) with whom he co-edited Jäschke's Tibetan grammar (3rd ed.), and Johannes Schubert (1896-1976), later Professor of Tibetan and Mongolian at the University of Leipzig.

Francke was a scholar of many talents. He played violin and cello, he drew sketches (some of which are to be found in his book *Durch Zentralasien*), collected plants and animals, he wrote poetry and made musical compositions. He got along with children very well as is proved by the recollection of his former pupils, and also by his own descriptions of his life as a teacher at the mission school (published under a pseudonym). He led a very simple life and did not need much for himself. When he travelled he usually walked; was there a need to take the railway, he chose the cheapest fare. He must have had a very impressive personality; one of his colleagues, an indologist, once said: «In his presence one automatically tried to be a proper and honest person.»

Before we turn to Francke's contributions to Tibetan studies, a few words about his wife, Anna Theodora who was born in South Africa in 1875. In 1896 she was sent to Amritsar to improve her English, and in 1897 she married A. H. Francke. As

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[5]Tibetische Handschriftenfunde aus Turfan. *Sitzungsberichte der Preußischen Akademie d. Wiss. Phil.-hist. Kl.* 1924, 5-20,110-118, etc.

she suffered under the alpine climate of Ladakh she had to return to Germany soon. Another attempt to adjust to life in Ladakh failed. So she took care of the education of the three children in Germany. She died in 1945, just before the end of the war. Of the three children Hilde Deskyid [Tib. bde-skyid - «happiness and blessing»], born in 1903, is still alive and stays with her son Martin Klingner (himself a minister of the Moravian community) in Neuwied, Germany. In spite of Theodora Francke's brief stay in Ladakh, she was extraordinarily interested in history and culture of the region. She translated a description of the Doghra War and the Lower Ladakhi version of the Gesar saga that was edited by her husband in the *Bibliotheca Indica* (No. 168. - Calcutta 1905-1941. XXXII,493 pp.).

Theodora's elder sister married the physician Dr. Karl Marx (1857-1891) who worked until his untimely death as an opthalmologist and Moravian missionary at Leh. He became one of the pioneers of Ladakhi historiography by publishing one of the main chronicles[6].

August Hermann Francke's contributions to the study of Ladakh, Lahoul, and Tibet were manifold. He studied the history, religion and mythology of Western Tibet, dealt with the Tibetan and other languages, especially Bunan, Tinan, and Ladakhi, worked as a translator (of the Bible and a number of educational and scholarly texts) and explained the Tibetan musical system. He is also credited with the publication of the first Tibetan newspaper. All this was done beside his missionary duties. As a scholar, he is in the tradition of his predecessors within the Moravian community, Isaak Jakob Schmidt[7] who was connected with the community of Sarepta on the Volga, Heinrich August Jäschke, and August Wilhelm Heyde. He may not have been such an outstanding linguist as Jäschke but he compensated this by making important contributions to other fields of study.

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[6]Three documents relating to the history of Ladakh: Tibetan text, translation and notes. *Journal of the Asiatic Society of Bengal*.60.1891,97-135; 63.1894,94-107; 71.1902,21-34. - His mss. were acquired by Berthold Laufer and are today in the possession of the Field Museum of Natural History in Chicago.
[7]See Franz Babinger: Issak Jakob Schmidt, 1779-1847. Ein Beitrag zur Geschichte der Tibetforschung. *Ostasiatische Zeitschrift*.8.1919/20,7-21.

Before reviewing Francke's scholarly achievements it should be pointed out that Tibetan studies in Europe developed rather late. The beginnings are connected with the names of Körösi Csoma Sandor[8] (1784-1842), Isaak Jakob Schmidt and Anton Schiefner who promoted this new Oriental discipline. Only by the end of the nineteenth century there was a small number of Indologists and Buddhologists who had a suffieicnt command of Tibetan. Among the German scholars Emil Schlagintweit (1835-1904), Albert Grünwedel (-1935) and Berthold Laufer (1874-1934) should be named. On Ladakh very little was known, and this was derived from British sources. Francke had never received proper scholarly training, and it is therefore so much more surprising that he did so remarkably well. Also, he was able to look at things critically, and not only judge from the point of a missionary.

Francke's contributions to the exploration of the history of Western Tibet

The most important source of Ladakh history is the relatively recent *Chronicle of the Kings of Ladakh* (La-dvags rgyal-rabs) which was published by E. Schlagintweit in 1866. Karl Marx, Francke's brother-in-law, had revised the texts on account of other manuscripts. This research stimulated Francke to write a history of Ladakh: *A history of Western Tibet, one of the unknown empires* (London 1907) which replaced the dated pioneer work by general Alexander Cunningham: *Ladak, physical, statistical, historical*[9]. Francke managed to give a convincing chronology of Western Tibetan history, based upon rock inscriptions that he and his fellow-missionaries collected[10], the Kashmiri *Râjataraṅginî* and Chinese sources. Particular attention was given to the Doghra war (1834-1841) and the annexation of Ladakh by the Kashmir-Jammu state as this was still alive as part of the oral tradition[11]. As to the early history of West Tibet, Francke's interest was drawn to the motif of gold-digging ants which existed according to Herodot

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[8]See the introduction by J. Terjék to Tibetan-English dictionary by Alexander Csoma de Körös. [Reprint.] Budapest 1984.
[9]London 1854.
[10]*Collections of Tibetan historical inscriptions on rock and stone from West Tibet*. 1. Kyelang 1906. 26 pp.; 2. Kyelang 1907. 32 pp. 40 copies only.
[11]*Kha-la-tse-pa me-me Thse-bstan-gyis bśad-pa'i Thâ-dmag-gi lo-rgyus bźugs-so*. Leh 1903. 16 pp.; translation by Dora Francke: 21 pp. 50 copies only.

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and Megasthenes in a country which scholars belived to be Dardistan[12]. Francke investigated and actually found two Ladakhi versions of this tale, proving the reliability of these oral traditions[13]. By checking the 18 hymns of the Bononâ festival[14] which was celebrated by the Dards every three years Francke proved that the Dards were originally aryan and immigrated from Gilgit. This and other evidence enabled Francke to draw a language map of Western Tibet[15].

The *History of Western Tibet* makes easy reading and is well illustrated. There are translations from the Ladakhi chronicle and also folk-songs. While the book does not have scholarly pretensions, it is considered a fundamental work even today, owing to the many new sources. Francke himself did much work to improve the knowledge of Ladakh history. The 2nd volume of his *Antiquities of Indian Tibet* provides the carefully edited texts and translations of *The chronicles of Ladakh and minor chronicles*, altogether 23. Francke's annotations and maps are of great importance. In the meantime only little research has been done in this field.

A series of papers on archeological topics testifies to Francke's interest in this field of study.[16]

Francke and the non-Buddhist literature of Tibet

The religious and mythological beliefs and ideas of the pre-Buddhist era are usually referred to as Bon religion. But we are still in a difficult position to state what it really is as so many traditions are interwoven and the later Buddhist dominance also affected the extant texts.

Francke started with research on the Kesar saga[17]. He did not use one of the current manuscripts of the saga but collected the versions orally transmitted by

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[12]B. Laufer in *Toung Pao*.9.1908,429-452.

[13]Two ant stories from the territory of the ancient kingdom of Western Tibet. *Asia Major*.1. 1924,67-75.

[14]*Indian Antiquary*.34.1905,93-110.

[15]*Journal of the Asiatic Society of Bengal*.73.1904,362-367.

[16]Rock-carvings from Lower Ladakh. [1] *Indian Antiquary*.31.1902,398-401; [2] *Indian Antiquary*.32. 1903,361-363; [3] Leh 1902. 10 pp.; Archaeological notes on Balu-mkhar in Western Tibet. *Indian Antiquary*.34.1905,203-210. - Kleine archäologische Erträge einer Missionsreise nach Zangskar in Westtibet. *Zeitschrift der Deutschen Morgenländischen Gesellschaft*.60.1906,645-661; 61.1907,645-647. - Archaeology in Western Tibet. *Indian Antiquary*.35.1906,237-241; 36.1907,85-98; 148. - Archäologische Expedition an der indisch-tibetischen Grenze. *Umschau*.14.1910,666-668.

[17]*Der Frühlingsmythus der Kesarsage*. Helsingfors 1900. VI,34,31 pp.

the Bhedas (caste of musicians). The most explicit version was published by him in the *Bibliotheca Indica*. Francke claimed that the oral version of the saga contained pure elements of the original Bon religion while the versions in literary Tibetan were much later. Francke generalised some of his interpretations very early after he had published and analysed only 22 pages of text. This led to a controversy with Berthold Laufer who criticized Francke's premature interpretations[18]. As a matter of fact, Francke later on found more material to support his views[19] but also followed the good advice not to apply one's theories to a text instead of building a theory on the facts provided by the text. Francke's publication of the Tibetan text of the Lower Ladakhi version is accompanied by an English resumé, and this year Theodora and A. H. Francke's German translation of the whole text was published for the first time[20].

The other important source was the *gZer-myig*, edited by Francke on the basis of the illustrated manuscript of the Prussian State Library. He managed to publish 7 (out of 21) chapters[21]. It is a pity that Francke just edited the text and gave a translation. There are neither introduction nor notes. Nevertheless it is a pioneer work. The contents of this biography of gShen-rab, the mythical founder of the Bon religion, is given by Francke in his *Geistesleben in Tibet*[22].

Another source Francke found in the traditional wedding-songs of which he collected a large amount[23]. Part of them were published by him in translation, and with an introduction[24]. Still another source were the hymns of the spring festival (*gliñ-glu*) which Francke published under the title of *Ladakhi songs*[25] and which contain information on the traditional mythical and cosmological ideas of the Tibetans. While Francke's interpretations are still controversially discussed it

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[18]*Wiener Zeitschrift für die Kunde des Morgenlandes*.15.1901,77-98.
[19]Der Wintermythus der Kesarsage. Helsingfors 1902. VII,77 pp.
[20]Walravens/Taube (see below),347-511. Francke's text and interpretation of the Kesar saga are discussed by R. A. Stein: *Recherches sur l'épopée et le barde au Tibet*. Paris 1951, and by Karl Jettmar: Das westtibetische Zentrum der Kesarsage - zur Rechtfertigung der These A. H. Franckes. *Wissenschaftsgeschichte und gegenwärtige Forschungen in Nordindien*. 1990,259-265.
[21]*Asia Major* 1.1924; 3.1926; 4.1927; 5.1930; 6.1930; NS 1.1949/50.
[22]Gütersloh 1925. 80 pp.
[23]Manuscripts in the Berlin State Library, Dept. of Manuscripts.
[24]*Tibetische Hochzeitslieder*. Hagen, Darmstadt 1923. 71 pp. 4°
[25]5 parts: Leh 1899-1903.

was certainly his merit to make all this source material available to the scholarly world.

Francke and Tibetan music

While Francke was not impressed by the performance of a drama at the famous Hemis monastery, he became quite interested in the folksongs[26] of Ladakh. There are two kinds of songs, the improvised *thoṅ-skad* (plough song), and the *glu*, popular songs in formal style. While the former is interesting because of its contents but lacks an æsthetic form, the latter exaggerates formal aspects and learned contents. Francke discussed the texts and instruments, and above all, published several of the melodies[27].

Francke and the Tibetan Bible

As a missionary Francke paid of course particular attention to the Bible. While parts of the scriptures were available already in translations by his colleagues, Francke worked on the revision and improvement of these portions and also translated a number of the missing parts. The complete Bible translation was published in Lahore in 1948, and is the result of a close cooperation between Francke and the Tibetan pastor Yoseb Gergan. If we look at Francke's publications and the records of the British & Foreign Bible Society we find that he played an important role in the process of the Bible translation. In 1904 he had the psalms printed in Calcutta. In 1906 I Samuel was printed in Bombay in a lithographic edition of 300 copies. The printing was paid for by Francke's honorarium of *Bibliotheca Indica* publication. Francke translated St. Mark into Ladakhi; his Tibetan assistant Zodpa helped with the translation into Bunan and Manchâṭî. He started an translation into Brogskad (East Dardic). The records give an account of Francke's numerous further revisions and publications. It may be more important here to point out that Francke followed his predecessors in the

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[26]Musikalische Studien in Westtibet. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 59.1905,91-104.
[27]Tibetische Lieder aus dem Gebiet des ehemaligen westtibetischen Königreiches. *Mitteilungen des Seminars für Orientalische Sprachen zu Berlin.* 1. Abt. 34.1931,93-136.

view that the Bible should be translated into a classical Tibetan style that would be read anywhere in Tibet. David Macdonald who revised part of Francke's manuscripts was in favour of a more colloquial style. Francke preferred to have further translations into the individual dialects if necessary, and he therefore translated St. Mark into Ladakhi, Bunan and Manchâtî. Gergan followed Francke's line, and so the current Bible translation may be considered as no mean achievement also from the linguistic and literary point of view.

Francke's published and unpublished works

When Francke died in 1930, part of his manuscripts and books were acquired by the Prussian State Library and another part, apparently through the good offices of Francke's disciple Johannes Schubert, by the University of Leipzig. The difficult economic and political situation in Germany in those years, the forthcoming Nazi regime, and the outbreak of World War II prevented any further work on or with Francke's materials. It was only a few years ago when 1 was transferred to the Berlin State Library and went through some Francke manuscripts that I became curious and started tracking down the rest. I had the good fortune of meeting Dr. Manfred Taube, of the University of Leipzig, who tried to do the same thing. We cooperated on a bibliography and an inventory of Francke's and other Moravian missionaries' materials on Western Tibet which was published earlier this year[28]. Francke's publications cover no less than 221 numbers. The manuscripts in Berlin cover about 30 numbers (units), those in Leipzig 101. Two folders containing Francke material are to be found in Herrnhut at the archives of the Moravian missions. This material consists of Tibetan texts, like inscriptions, wedding songs, notes for lectures, translations, a description of the Turkestan collections in the Munich Museum of Ethnology etc.

Among the many publications by Francke is a collection of Tibetan fox stories[29]. As in most countries of the world the fox is also considered a smart trickster in

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[28] *August Hermann Francke und die Westhimalaya-Mission der Herrnhuter Brüdergemeine.* Stuttgart 1922. 531 pp, 281 ill.
[29] Reynard the fox in Ladakh. *Proceedings of the Asiatic Society of Bengal.* 76.1902,76-79. - *Kha-la-tse-pa rGya-mthso-pa dkon-mchog-bkra-śis-kyis bśad-pa'i wa-tse'i sgruńs yod.* Leh 1903. 16 pp. - *Wa-tsei-sgruńs.* Fuchsgeschichten [...]. *Asia Major.*2.1925,408-431.

Western Tibet. Recently Erika Taube analysed some of these stories in the context of similar Central Asian and Western stories and came to the conclusion that the well-known tale of Puss in Boots probably goes back to a Tibetan (and Central Asian) tradition, and the actual hero should be a fox[30].

The Moravian missionaries' publications in Tibetan

When I looked at the Tibetan collections of the Berlin State Library (at that time still divided into an East and a West Berlin State Library that were not allowed to cooperate officially) I came across a small number of Christian tracts and portions of the Bible in Tibetan. Most of them seemed to be printed in Kyelang or Leh about the turn of the century. This aroused my curiosity, and I found some more at the British Library and at the Munich State Library. Dr. Taube had searched the Herrnhut archives and the Halle library of the German Oriental Society for similar reasons, and we came up with more than 150 of such Tibetan titles, several of them in different editions. Some copies have notes in the hand of A. H. Francke who donated many of these texts. They were printed by the missionaries and their assistants on an old lithographic press in small editions, sometimes not even 40 copies. A particular curious item is the La-dvags-kyi ag-bâr, «Ladakh Newspaper», written and published by Francke. This monthly paper, published between 1904-1907, is credited to be the first Tibetan newspaper.[31]

Some notes on the Moravian missionaries' reports as ethnological source

While the number of Moravian missionaries in Western Tibet has always been small, and the World Wars made work in that area difficult, not to say impossible, an analysis of the work done shows impressive results. As the number of converts was very small the missionaries gave vivid reports on the area, the people and their culture to stimulate their superiors' and the community's interest in the

[30]War das Urbild des gestiefelten Katers ein Fuchs? Proceedings of the Csoma de Körös Memorial Symposium 1976. Budapest 1978,473-485. - A. H. Franckes Fuchsgeschichten im Kontext der zentralasiatischen mündlichen Überlieferung. WGF 1990,266-272.
[31]Cf. Johannes Schubert: Tibetische Literatur im modernen Gewande. Artibus Asiae.5.1935,94-98; John Bray: A. H. Francke's La dvags kyi akh bar: The first Tibetan newspaper. The Tibet Journal. 13.1988,58-63.

support of the Himalaya mission. The reports were condensed or summarized and then partly published in the *Missionsblatt der Brüdergemeine* and other journals of the Moravian mission. Leafing through the numerous volumes yields hundreds of printed pages on the Ladakh. In the meantime a Vienna disstertation proved the ethnological value of these reports[32]. Many of the original letters and reports are still to be found in the Herrnhut archives. Besides these official communications on their activities some missionaries published in other journals. Walter Asboe who started working in Kyelang in 1925 published a new series of the Tibetan newspaper (*Kye-lan ag-bar*; 1926, title changed in 1935 to *La-dvags pho-ña*) and contributed to ethnological papers. Friedrich Redslob (1838-1891) published a few articles on geographical topics while Samuel Ribbach (1863-1943) dealt with portraits of Padmasambhava and Tibetan life[33].

A first attempt has been made to compile information on the work of the Tibetan assistants and friends of the Moravian missionaries, without whose help much of their work would have been impossible. While Yoseb Gergan (1878?-1946) is the most outstanding of them[34], Samuel Joldan ('Byor-ldan), Eliyah Thsetan Phunthsog (Tshe-brtan Phun-tshogs, 1908-1973; Gergan's son-in-law), Tharchin (mThar-phyin) and Zodpa should also be mentioned.

This brief account of the life and work of some Moravian missionaries in Ladakh shows that there are still hidden treasures in some of our libraries which deserve to be studied.

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[32]Wolfgang Friedl: *Die Kultur Ladakhs erstellt anhand der Berichte und Publikationen der Herrnhuter Missionare aus der Zeit von 1853-1914*. Wien 1984. 698 pp.
[33]*Drogpa namgyal. Ein Tibeterleben.* München 1940. 263 pp.
[34]John Bray is going to present a paper on him shortly.
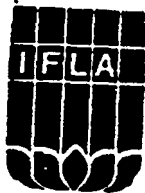
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The National Art Library and the Indian Collections

of the Victoria and Albert Museum, London.

by

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Abstract

The paper describes the origins and scope of the collections of Indian art in the Victoria and Albert Museum in London. It also describes the parameters of the document collecting policy in the National Art Library supporting research into Indian art and it explains how the library obtains publications from India.

"From Persia to the Chinese Sea, from the icy regions of
Siberia to the islands of Java and Borneo, from Oceania
to Socotra, India has propagated her beliefs, her tales
and her civilisation. She has left indelible imprints on
one fourth of the human race in the course of a large
succession of centuries. She has the right to reclaim in
universal history the rank that ignorance has refused her
for a long time and to hold her place amongst the great
nations summarising and symbolising the spirit of
Humanity."

Jawaharlal Nehru, 1946.(1)

1. The History of the Indian Collections in the V&A

The Indian Collections in the custodianship of the Victoria and

Albert Museum (V&A) make a significant contribution to bringing the

great and enduring contribution of Indian Art into international

focus. Some 30,000 objects dating from 200 BC to the present day,

the largest collection of Indian art outside the Indian sub-

continent, reflect the great cultural heritage of India as well as

the history of her connections with Great Britain. They show the

myriad ways in which Indian art has influenced Western culture.

The foundation of the collections can be found in the labours of

the officials of the Honourable East Indian Company (HEIC). The

Governor-General Warren Hastings' enlightened policy of promoting

Indian Studies resulted in the founding of the Asiatic Society of

Bengal with its journal Asiatic Researches, by Sir William Jones in

1784 (2). Members of the Society collected and studied

manuscripts, coins, inscriptions and monuments in their researches

of ancient Indian history and by 1796 so much had been accumulated

that special housing for the preservation of these treasures became

a necessity, resulting by 1814 in what is now known as the Indian

Museum in Calcutta. In the meantime in London, however, the Court

of Directors of the HEIC became so concerned about the survival of

the manuscripts that in 1801 they allocated special accommodation

in which to house these, the so-called Oriental Repository, at

their new building in Leadenhall Street. However, the first

inventories show that much besides manuscripts was deposited here,

for instance three Elephant Heads and six brass images representing Hindu Gods (3). In 1808 receipt of one of the most celebrated objects in the Collection was recorded: Tippoo Sultan's musical tiger. This is a painted wooden sculpture of a tiger devouring an European; the body of the tiger contains an organ which, when cranked, makes the most horrible groaning and creaking sound.(4)

With continuing additions to the collection a curator was appointed in 1820 to take charge. The Great Exhibition of 1851 resulted in the acquisition by the HEIC of a large number of items brought over for display in the India Department of the Exhibition, the nascent V&A also purchasing material from the Exhibition. After the Indian Mutiny in 1857 the British Crown took over the functions of the HEIC and consequently also its collections in London, opening them for public inspection in Fife House in Whitehall in 1861 where 175,000 visitors attended during its first two years. However, the library collection remained in Leadenhall Street, thus splitting up the collections and although during the next 70 years innumerable plans were made to reunite them, the collections remained split. The library eventually became the *India Office Library* today part of the *British Library* (5). The bulk of the other collections were eventually merged with the objects acquired separately by the V&A (some 2,000 by 1874) to form the V&A's Indian and South East Asian Collection. This occurred in the 1870s when the Government leased space in South Kensington, opposite the V&A, to house the HEIC collection. In 1879 the Council of the India Office finally transferred custodianship of this collection to the South Kensington authorities, today the V&A. In the process of rationalisation which followed the natural history collections went to the new Natural History Museum and Kew, the finest sculpture, including the Amaravati Marbles, going to the British Museum.

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Moves were immediately made to make good deficiencies in the
collections and the future first Keeper of the V&A's Indian
Section, C.P. Clarke, was sent to India where he made some 3,400
acquisitions. He later became Director of the V&A. Rebuilding
work provided extra space to the Museum authorities and the
collecting policy became ambitious. For most of the first half of
the 20th century plans were made, changed and remade to establish a
Museum of Asiatic Art and Antiquities around these collections, but
to no avail. In the mid-1950s the premises of the V&A Indian
Section were demolished to make way for an extension to Imperial
College and while some of the objects were moved into the main V&A
building, by far the largest part went into storage.

This alarming situation was successfully addressed only in the late
1980s when the Indian and South-East Asian Collection successfully
completed on a project to redisplay parts of its collection in a
newly refurbished series of galleries. A new gallery of early
Indian art shows a key section of sculpture dating from 200 BC to
1500 AD. A further gallery shows the spread of cultural influence
from India to South-East Asia. The apex of this programme was the
creation in 1990 of the new Nehru Gallery of Indian Art in which
some of the most important objects in the collection produced in
the period 1550-1900 are displayed. Amongst them are Tippoo's
Tiger (mentioned above), the Golden Throne of Maharajah Ranjit
Singh and jade wine cups commissioned and owned by the Mughal
emperors Jahangir and Shah Jahan. These treasures are shown along
with a wide range of other objects in order to present and explain
the courtly artistic tradition of India in the period 1550-1900.
The gallery highlights the ways in which the refined craft
traditions which served the courtly culture formed a key to India's
trading importance in the period, showing the impact of colonial
rule on Indian culture.

2. Brief overview of the contents of the collections

At present the V&A contains a collection of Indian paintings of world standing with perhaps as its greatest strength the outstanding body of miniature paintings of the Mughal period, particularly the paintings produced for the courts of the emperors Akbar (r.1556-1605), Jahangir (r.1605-1627) and Shah Jahan (r.1628-1658), representing the peak of Mughal painting. The collection of Pahari (Punjab Hill) paintings is one of the finest outside India. The Rajasthani collection, while patchy in some areas, contains important items such as two leaves from the 1605 Chawand ragamala and works from significant but rarely seen courts such as Junia, Sitamau and Ghanerao. Rare early works include the 'Vredenburg' manuscript of the "Perfection of Wisdom" - an illustrated Buddhist work from Eastern India dated to c.118 AD. Later categories include lively bazaar paintings of Kalighat in Calcutta, works by Rabindranath Tagore and a growing collection of works by contemporary artists working both in India and Britain.

The sculpture collection represents most of the mainstream styles of Indian traditions from around the first century AD. The Kushan schools of Mathura and Gandhara are particularly strong, linking the art of northern India with the Graeco-Roman influenced art of the Gandharan region of modern Pakistan.

The collection is especially rich in decorative arts, including arms and armour; jewellery and ritual objects made of metal; ceramics; small items of woodwork and lacquer; basketry and leatherware. The textiles collection contains more than 11,000 items: carpets and rugs, embroidery, appliqué and patchwork, and Kashmir shawls. The largest part of the collection, piece goods and trimmings, including woven silk, printed cottons and silks and brocaded silks, were acquired more or less *en masse* as examples of the then current manufacture in the mid-nineteenth century. 79

As for the performing arts, the Museum has a large collection of Indian musical instruments, puppets, masks and other performance items.

A few words should be said about book art in the collection. Whilst the manuscripts of the HEIC remained with the India Office library, the V&A set about remedying this lack in the late 19th century. Amongst C.P. Clarke's purchases (mentioned above) were the folios from the Hamzanama. During the reign of Akbar, the Royal Studio, supervised by two Iranian master artists, produced its first major project over a period of some 15 years, starting about 1562: the monumental Book of Hamza, the Hamzanama. It depicts the legendary tales of Hamza, a figure based on a historical Iranian leader and also identified with the uncle of the Prophet Muhammad. Out of an intended total of 1400 miniatures (14 volumes of 100 illustrations) less than 120 survive, 26 of which are in the V&A. These vast illustrations stand right at the beginning of the Mughal tradition of manuscript illumination. The story is written on the back of the 3ft 9ins square paintings suggesting that a storyteller held it up to an audience as he was telling his tale.

By about 1590 the studio completed the Akbarnama, the official history of Akbar's reign by the court historian Abu'l Fazl. Tne 117 miniatures from this royal copy in the V&A cover the events from 1561 to 1573.

The collection obviously ranges also beyond Mughal work. From the Rajput independent principality of Basohli in the Punjab, relatively unaffected by the Mughal traditions, came the Rasamanjari (c.1680), a treatise on loving. It came to the Museum from the estate of Sir William Rothenstein who probably acquired it from the great critic, scholar and mystic Ananda Coomaraswamy who did so much to raise consciousness about the spirituality of Indian art (6).

3. <u>Parameters of documentary collecting in the National Art</u>
   <u>Library</u>

The Indian Collection has, in line with other collections in the
V&A its own small research library. It is particularly strong in
19th century photographs, and its books are currently being
catalogued by the NAL and added to its database. Whilst its
current acquisitions programme is concentrated on the immediate
research needs of the Indian and South East Asian Collection staff
the collection in the National Art Library (NAL) is intended to
provide. in addition to backing up research in the collection, the
research community at large with the documentation necessary for
the in-depth study of the arts of India.

The intensity of the collecting policy is guided by this
requirement to collect material to a research level. Ex ct figures
of the size of the collection in the NAL supporting research into
Indian art is not available, but the intensity of current
collecting can be gauged from the figure of nearly one and a half
thousand titles added over the last five years.

It collects all major published source materials required for
dissertations and independent research, including materials
containing research r porting, new findings and other information
useful to researchers. It aims to include all important reference
works, a wide selection of specialised scholarly monographs as well
as a very extensive collection of journals and major indexing and
abstracting services in the field. Older mate: al is retained for
historical research. Textbooks are specifically not collected, in
particular teaching materials for undergraduate study. Elementary
works and works of a popular nature, 'potboilers', are not
collected except as documents that show how information circulates
and how art and design are 'consumed'. Only materials that have a
real value for research and documentation are collected.

- 6-81

In theory the NAL collects research materials regardless of language, but in practice works are acquired predominantly in the major European languages. As regards these languages works are usually acquired in their original versions and translations only in the case of seminal works or when the translation represents a text or bibliographical apparatus that has been updated. However, as far as works in Asian and oriental languages are concerned publications are acquired in the original languages only when they are not available in translation. In practice, as far as Indic languages are concerned, the NAL does not acquire them since the bulk of research material on India is published in English and other European languages.

4. Collecting by subject

It follows from the above delineation of the Indian object collection that we collect documentation almost exhaustively in the field of art, craft and design. In the fine arts of painting and sculpture we cover all periods, including the contemporary scene. As for architecture we collect comprehensively up to Indian Independence but for the period since we select mainly those architects of international importance, relying on the British Architectural Library for more detailed coverage. For the applied arts all periods are covered: ceramics and glasswork, engravings and other graphic arts, metalwork, textiles, costume and fashion, woodwork and furniture and all other crafts. However, we very rarely collect any material exclusively devoted to coins. The only restriction applied is that, in common with other collections in the NAL, we do not collect material relating to the archaeology of prehistory.

We collect very selectively in the area of the performing arts. As far as music is concerned, we collect material on instruments only and not on performances per se. As for dance, it is of course

essential that we cover the various traditions since it informs the study of sculpture, dress and ornament; however, we do not attempt to document the history of dance itself. The same applies to the theatre arts where collecting is focussed on costume and decor. We do not collect material on cinematography except material which looks at the graphic arts in relation to film, e.g. posters and advertising. Film is covered by the *British Film Institute*.

The study of the artefacts held in the V&A and the planning of galleries require works relating to history, literature and religion that are not specifically devoted to art, craft and design. Such works are collected only to a basic level, the other great oriental libraries in London, the *School of Oriental and African Studies of the University of London*, and the *Oriental and India Office Collections of the British Library* providing the research resources required. However, materials that give swift access to the bibliography of any relevant topic in these supporting areas are considered to be of particular importance as providing a background to research, and we collect these extensively. For iconographic interpretation works on Hinduism, Jainism and Buddhism are collected.

Approaching material by *form* Museum publications play a central role. All handbooks and catalogues that describe and give access to the holdings of museums and galleries when these have an interest for art, craft and design are acquired. Guides designed to introduce the public to such museums and galleries are collected to a basic level, or to a study level when they provide the chief means of discovering information about an institution. Museum yearbooks, dictionaries, arts encyclopaedias and art biographical dictionaries are acquired. Finally a brief word about museology and conservation: any work which supports the task of managing and administering the V&A is acquired, including legal studies as they

impact on museology. Technical manuals on conservation are not acquired in the NAL since the Museum's Conservation Department maintains its own conservation library.

5. <u>Mechanisms for acquiring documentation</u>

Beyond setting the parameters of what should theoretically be collected lies the problem of how to obtain the publications in practice. It is easy to obtain up-to-date information on what is published in those countries where national bibliographies appear regularly and where the book publishing industry provides tools identifying books in print on a regular basis. At the NAL we have adopted the principle of centralising our purchases of foreign materials to one supplier per country in as far as that is possible. It is obvious that this is a most cost-effective method since the quantity of payment transactions can be minimised. Those book suppliers chosen are in effect self-selecting through the quality of the services they supply. Winning formulas include regular provision of bibliographical information on recently published books and books to be published, as well as descriptive information on the contents of the books described, the level of readership the work is aimed at and background information on the authors. Using such central suppliers makes it relatively easy for us to stay abreast of publishing in most countries where South and South East Asian studies are well developed, such as Germany, France, the United States and Great Britain.

However, the question is how to obtain information on books published on the Indian sub-continent. India has one of the largest publishing industries in the world and is one of the largest producers of books in the English language. Book distribution is naturally also a major industry and the 1990 edition of the <u>Directory of Indian publishers and distributors</u> (Varanasi: Indian Bibliographic Centre, ISBN 81-85131-05-8) uses

nearly 200 pages to list booksellers and publishers in India.

The agency that the NAL uses to acquire current publications from India is *D.K. Agencies* (7). The company was set up in 1968 and deals exclusively with a foreign clientele. Its efficiency can be gauged from the fact that it supplies books to 80 countries worldwide, including the national libraries of Australia, Denmark, France, Germany, Great Britain, Israel, Japan and so forth. In England it supplies all the major libraries in which Indian art is collected, and worldwide it supplies research material to most major academic and public libraries. The company uses a vast array of bibliographic tools to bring new books to our attention. These include the usual announcement formats of brochures and fliers. DK Books of the week is a systematic bibliographic bulletin which provides full publishing information as well as subject descriptions indicating the subject scope of the work, the scholarly apparatus present in the work: glossaries, indexes, etc. The quarterly DK Newsletter provides news and reviews of new Indian publications in English. DK Publishing News: Art and Fine Arts is an occasional circular listing the latest titles of a scholarly character. The main section provides full descriptions for each book covered including a list of contents; a complementary section provides bibliographic information on related titles. At the end of each calendar year the information on the major academic and research works published during the year is pulled together in MIWA (Major Indian Works Annual). The latest edition (1991) covered some 1,224 items selected from over 6,000 Indian titles in the English language. The work is divided by subject, with a special section on Art and Fine Arts. A very valuable section, Reference Books, provides information on atlases, gazetteers, bibliographies, indexes, dictionaries, encyclopaedias, directories and yearbooks.

Of great value are the tools used to provide information on

periodicals. __Current Indian Periodicals/Serials on Arts and Fine__
__Arts__ (including Performing Arts) provides subscription information
as well as indications of change of title, etc. The latest edition
of this publication listed some 82 titles from all over the sub-
continent. The __Subscribers' Guide to Indian Periodicals/Serials__
(latest edition 1990) lists in alphabetical order and by subject
English language journals and periodicals covering India's current
research and academic activity in the humanities, science and tech-
nology, etc. Of particular value to serial librarians is the fact
that the company does not simply place a subscription on the
library's behalf with the publishing body, but that it acquires the
item in question itself before forwarding it to the subscriber,
hence missing issues are identified and dealt with in India. This
is a major boon. For retrospective purchasing in the difficult
field of serials __Backsets of Indian Journals/ Periodicals on__
__Humanities and Social Sciences__ is most helpful.

There are of course other suppliers of current books in India w.io
deal with foreign countries and we regularly receive information,
for example, from Firma KLM Book Agency (8). Antiquarian material
is of course a completely different issue and there are a large
number of boo`- dealers which deal with such older material. Their
names can be located in the __Directory of Indian Publishers and__
__Distributors__ mentioned above.

6. Conclusion

The success of the NAL's collection development policy finally
rests on good communication between the staffs of the library and
of the Indian Collection. To achieve such co-operation we have set
up a subject-liaison scheme between the library and all the
different collections in the Museum. Library staff keep the
collections abreast of developments in the library and exchange
information with collections staff on proposed acquisitions. The
enthusiasm with which the individuals concerned in the Library and
the Indian and South-East Asian Collection approach this
interaction bodes very well for the future development of the NAL's

Notes

1. Quoted in: John Guy and Deborah Swallow: __Arts of India:__ __1550-1990__. London: Victoria and Albert Museum, 1990, p.9.

2. A history of the Society can be found in O.P. Kerawal: __The__ __Asiatic Society of Bengal and the discovery of India's past,__ __1784-1838__. Delhi: Oxford University Press, 1988.

3. For a full description of the history of the Collection see Robert Skelton, "The Indian Collections: 1798 to 1978". In __The Burlington Magazine__, vol.102, no.902, May 1978, pp.297-304.

4. The historical associations to this object is described, alongside many others, in Anna Sommers Cocks: __The Victoria__ __and Albert Museum: the making of the collection__. Leicester: Windward, 1980.

5. A short history "The British Museum Library and the India Office" by Ilse Sternberg appears in the __British Library__ __Journal__, vol.17, no.2, Autumn 1991, pp.155-166.

6. Sommers Cocks, op art, p.126.

7. D.K. Agencies (P) Ltd.
   A/15-17, Mohan Garden
   Najafgarh Road
   New Delhi - 110059

8. Firma KLM Book Agency
   2/1 A.K. Pal Road
   Calcutta - 700034

IFLA GENERAL CONFERENCE NEW DELHI 1992

Division: SPECIAL LIBRARIES

Section/RT: ART LIBRARIES

133-ART-8(WS)-E

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE): Collection development and acquisition of art materials with special reference to South and South and South-East Asia

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Collection development and acquisition of art materials
with special reference to South and South-East Asia:
A case study of the Indira Gandhi National Centre for the Arts.

by

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New Delhi

For internal use only:

Meeting No: 135

;I: yes/no

ated number of participants meeting:

88

COLLECTION DEVELOPMENT AND ACQUISITION OF ART MATERIAL WITH SPECIAL REFERENCE TO SOUTH AND SOUTH-EAST ASIA: A CASE STUDY OF THE INDIRA GANDHI NATIONAL CENTRE FOR THE ARTS

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A.P. GAKHAR **

Abstract :

The Collection Development plays a pivotal role in all Libraries and the other activities revolve around it. An attempt has been made to highlight the experience gained in this direction at the Reference Library of the Indira Gandhi National Centre for the Arts. It also emphasises the role played by the Scholars and the Librarian in 'Collection Development' using the tools and the technologies available at their disposal.

Introduction :

In special Libraries 'Collection Development' (CD) is a powerful tool in achieving the objectives of the parent organisation. In this process due emphasis is laid on the present as well as future requirements of the scholars. The Multi-facted libraries attached to Museums, Galleries, Cultural Heritage Centres, Performing Art Institutions and other related discipline viz. Indology, Oriental Studies etc; can be categorised as 'Art Libraries'.

The Arts are here understood to comprise the fields of creative and critical literature, written and oral, the visual arts,ranging from the architecture, sculpture,painting &

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graphics to general material, cultural, photography, film, and all else in festivals, fairs and life-styles that has an artistic dimension.

The ways and means of Collection Development in Art Libraries are gernerally different than that of other Special Libraries. The experience gained at the Reference Library of the Indira Gandhi National Centre for the Arts, New Delhi is a clear illustration of the above statement, which is presented in the form of a case study.

<u>Role of Collection Developers :</u>

The Scholars and the Librarians play very important role in 'Collection Development through their coordinated efforts. They have to keep in mind the resources the constrant and the present & future requirements. Also they need to be objective while planning, and designing the methodology, keeping abrest with the current trends and availability of the material.

In Scientific Libraries, the emphasis is on current information, whereas in case of Humanities Libraries in general and Art Libraries in particular, the retrospective information is as important as the current information. Usually the Art Libraries support research prorammes on 'Cultural Heritage' (Retrospective Information) and present trends (Contemporary Information).

The strength of a library collection is not in its size. Rabindranath Tagore, the national poet of India said in

1929 that "Most Libraries are possessed with a passion for accumulation. Three quarter of their books do not come into use - their overgrown proportion even thrust into a corner the specially selected few that are meant for being actually used. In our popular parlance the man of large riches is called a great man. When a millionaire comes into gathering, all vie with one another to do him honour not dependent what he has to give, but merely what he has. Much in the same way bigness of all libraries is estimated by the number of its volumes. The facilities offered for their use that should have been its glory, are not deemed necessary for its pride". In essence the great poet is emphasizing the use than collection in numbers. Therefore, the collection development is to be constantly guided by the relevant purpose of its use. Every acquisition of document should simultaneously be guided by what is to be needed otherwise we will/left with chaff.

The following parameters would facilitate a great deal in building up a healthy'Collection Development' :

1.   Type of users to be served.

2.   Type of activities of users such as research, publications, projects, professional consultancy etc.

3.   Compatibility with the subject activities of parent organisation and library collection.

4.   Density and intensity of collection.

5.   Forms of material to be collected.

6.   Cooperation with other libraries.

The generally used tools of the 'Collection Development' in Multi-facted Art Libraries are :

1.   Retrospective subject bibliographies.

2.   Descriptive catalogues/handlist of manuscript of different libraries.

3.   Catalogue of Museum Collections.

4.   Catalogue of University Presses/Institutions.

5.   Catalogues of Standard Commercial publishers.

6.   Book Promotion literature like British Book News, Times Literary supplement etc.

7.   Accession list of sister liberaries.

8.   Book reviews published in standard academic journals and newspapers.

9.   Publishers announcements etc.

10.   Requisition from users.

11.   Subject Experts suggestions/views.

Collection Development at Indira Gandhi National Centre for the Arts, Reference Library

The Indira Gandhi National Centre for the Arts, established in the memory of Smt. Indira Gandhi, is visualised as a Centre encompassing the study and experience of all the arts - each form with its own integrity, yet within a dimension of mutual interdependence, interrelated with nature, the social structure and cosmology.

Through diverse programmes of research, publication, training, creative activities and performance, the IGNCA seeks

to place the arts within the context of the natural and human environment. The fundamental approach of the Centre in all its work will be both multidisciplinary and interdisciplinary. It has been conceived with several concrete aims :

1. To serve as a major resource centre for the arts, especially written, oral and visual source materials.

2. To undertake research and publication programmes of reference works, glossaries, dictionaries and encyclopaeidias concerning the arts, the humanities and general cultural heritage.'

3. To establish a tribal and folk arts division with a core collection for conducting systematic scientific studies and for live presentations.

4. To provide a forum for creative and critical dialogue between and among the diverse arts, traditional and contemporary, through performance, exhibitions, multi-media projections, conferences, seminars and workshops.

5. To foster dialogue between the arts and current ideas in philosophy, science and technology, with a view toward bridging the gap in intellectual understanding that too often occurs between the modern sciences on the one hand and the arts and culture, i.e., traditional skills and knowledge, on the other.

6. To evolve models of research programmes and arts administration more appropriate to the Indian ethos.

7. To elucidate the formative and dynamic factors in the complex web of interactions between diverse social strata, communities and regions.

8.   To promote awareness of and sensitivity to historical and cultural linkages between India and other parts of the world.

9.   To develop networks of communication with other national and international centres of arts and culture, and to affiliate with universities and other institutions of higher learning within India and abroad, toward the conduct and recognition of releated research in the arts, the humanities and cultural heritage.

Through specific programmes and projects the interdependence amongst the arts and between the arts and other forms of cultural expression, the mutual influences between diverse regions and the inter-relationship of the tribal, rural and urban as well as the literate and oral traditions will be investigated, recorded and presented.

Emerging logically from the above aims and objectives the IGNCA functions though five major divisions like, Kala Nidhi, Kala Kosha, Janpada Sampada, Kala Darshana and Sutradhara. The Kala Nidhi Division comprises a Cultural Reference Library of Multi-media, Multi-lingual, Multi-disciplinary Collection to serve as a major resource centre for the Humanity and the Arts, supported by a Computerised National Information System and data bank. In addition a Cultural Archives and an Area Studies/ Programmes are also integrated in this Division.

The Reference Library of IGNCA is a major component of Kala Nidhi Division. The library is conceived as a major

repository of reference material, primary and secondary relating to the humanities and the arts. It encompasses the disciplines of Archaeology, anthropology, ethnology, philosophy, literature, language, art and craft. It may be mentioned here that art here mean both written (Printed word) spoken (oral) and visual. The library concentrate on encyclopaedia, dictionaries, bibliographies, atlas, catalogues of unpublished manuscripts of India and Asian Origin particularly Southeast Asian Origin. The acquisition programme of library supports the research and publication programme of other academic division. From the programme chart of Kala Nidhi Division, it is very clear that Reference Library has two components. The first is the acquisition and the second is projects, bibliography Research and Development.

The collection development policy of the Reference Library emphasises on the development of collection in multi-media and multi-lingual form. The media have been identified as printed material, microforms, visual, audio and video.

This policy of 'Collection Development' has been laid down under the guidance of Dr.(Mrs.) Kapila Vatsyayan, a scholar of international repute in the field of Art & Culture.

Rare Books :

Acquisition of rare publications is the speciality of Reference Library. Rare and Antiquarian books are the store house of reprospective information about the cultural

heritage. They o nnect our present to the past and keep a
continuity of thought among generations. IGNCA has a policy to
develop collection of rare and antiquarian publications in
South and Southeast Asian Art. Some of the import acquisitions
of the library under this category are :

(1)   Salts views of India Cape & Egypt (1809)
(2)   Picturesque Voyage ⅄ India/by Thymes Daniell & William
        Daniell (1810)
(3)   Adventures of Qui Hi in Hindostan/Rowlandson (1816)
(4)   Hindoo and European manners in Bengal/A Colin
(5)   Views of Simla/G.P. Thymes (1846)
(6)   Rambles and recollections of an Indian official/W.H.
        Sleeman   -   2 vols. (1893)

Personal Collections :

        Personal Collections of eminent scholars in the field
of Arts & Humanities are very important from the 'Collection
Development' point of view. The scholars collect material in
their area of interest through out their life and the material
thus collected by the scholars is complete in totallilty and
becomes a very powerful tool of research in the libraries. The
material collected by scholars is not available easily through
commercial or other channels. Due to importance of Personal
Collections of eminent scholars, the Reference Library of IGNCA
has laid great emphasis on this in its Collection Development.
Under this policy, Personal Collections of Prof. Suniti Kumar
Chatterjee, a renowned linguistic of international repute has
been acquired by the Reference Library. This Collection of
20,000 volumes in about 15 languages has been donated to this
Centre by his son. Other important collections acquired in
this category are of Thakur Jaideva Singh , strong
collection   in Music & Philosophy;   Krishna Kriplani
Collection which   deals with the   disciplines   of Indian
Cultural Studies and Gandhian Studies. Important addition to
the collection of Reference Library has been the personal
library of Acharya Hazari Prasad Dwivedi in which there are

more than 10,000 volumes and this literary collection is represented by many Indian languages.

On Asian Art, Heeramaneck Collection donated by Mrs. Alice Heeramaneck, w/o Late Shri Nasli Heeramaneck from USA is of great reseach value. Recently another important collection of more than 12,000 volumes has been acquired from Chturvedi Shodh Mandir Pustakalya Samiti, Allahabad. Its importance lies in the publications of different aspects of Indian Society of 19th & 20th century in Hindhi language. However, in supplementation to Acharya Hazari Prasad Dwivedi Collection of literature, it will be one of the best collection in Hindi language on different disciplines of IGNCA's thrust areas.

It may been seen from the above that Reference Library is constantly on alert in developing its collections on the basis of personal collection of eminent scholars.

Series And Catalogues :

As a policy, the library is concentrating on building a complete corpus of printed material on catalogues of manuscripts of India and Asian origins published in all parts of the world. Already more than 1000 catalogues have been collected and a data base of union catalogue of catalogues (CATCAT) has been created. This helps in another programme of collection development in microfilming of manuscripts. The Reference Library has acquired catalogues of major Sanskrit, Persian, Arabic manuscripts from libraries/research

institutions of India, UK, USA, Germany, France, Itlay and Japan etc.

There are series publications of research institutions. Also some of the standard publishers bring out series of publications on Indological subjects as well on Southeast Asia. The major acquisition in this category are L.D. Series, Ecole de France, Institute of Indian Studies , Pondichery Series, K.P. Jayaswal Research Institute, Patna Series, Satpitak Series of International Institute of Cultural Studies, New Delhi, Bibliotheca India, Rajasthan Puratan Granthmala, Sampurnanand Sanskrit Visvavidyalaya Granthmala, Woolner Indological Series, Sri Ananthacharya Indological Research Institute Series, Chowkhamba Series, Gaekwad Oriental Series, Pali Text Society Series, Bulingen Series, Sanskrit College, Calcutta Series, etc. Such search Collection is being developed in the series to facilitate research on Indian Art & Culture and programmes of Kala Kosha Division.

Area Studies Programme :

The Library has embarked upon developing area collection particularly on Southeast Asia, Russian intellectuals & Orientalism, Central Asia and China. These areas have been selected as India has cultural interaction with these areas and geographical proximity also encourages us to develop collection in these areas. Cells on Russian Orientalism & Sino-Indian Studies are making concerted efforts to help building strong collection in these areas. Though a begining has been made in Southeast Asia also, however, lot

needs to be done in this area. Other areas seems to be on the right track. It is proposed to develop area study collection on West Asia, Africa & Latin America in near future.

Journals :

To acquired current information for research in art and culture, the library subscribed to 370 periodicals which includes both Indian & foreign periodicals. Efforts are also on to develop collection in the back files of periodicals.

Microforms :

Millions of Indic manuscripts are no longer accessible to research scholars in original. The Reference Library has started two programmes to develop microforms library on unpublished manuscripts in Indian & foreign Collections.

(i) Foreign Collection : A programme on bringing in Indic mss collection from Oriental & India Office Collection (Previously IOLR), British Library, London, Cambridge University Library, Cambridge, The Wellcome Institute for the Study of Histyory of Medicen. London, Bibliotheque Nationale, Paris, SPBK, Berlin have been initiated and already 1000 rolls of microfilms having more than 88000 / frames have been added to the collection. It is proposed to bring mss in microform from Darbar Library of Nepal and other European Collections in near future.

(ii) Indian Collection : The IGNCA has embarked upon an ambitious programme of bringing in microfilms of mss from Libraries scattered all over the country. Under the programme, Microfilming Unit of the Reference library is playing a major role. They go to the different Libraries

and microfilm their collections and bring in the master
negative to IGNCA. Further two copies on positive films are
prepared. One is given to the Reference Library for use of
scholars and second copy is given to the institution
concerned. The work in the following nine centres has been
started. Already above 180,00,00 frames have been produced :

1.   Bhandarkar Oriental Research Institute, Pune

2.   Government Oriental Manuscrip s Library, Madras;

3.   Saraswati Bhawan Library, Varanasi;

4.   Oriental Research Institute & Manuscripts Library,
        Trivandrum;

5.   Vaidika Samsodhana Mandala, Pune;

6.   Thanjavur Maharaja Serfoji's Saraswati Mahal Library
        Society, Thanjavur;

7.   Sri Ramaverma Government Sanskrit College, Tripunithura;

8.   Shree Jagad Guru Mooru Savira Math, Hubli;

9.   Manipur State Kala Akademy, Imphal.

        It is proposed to go on adding new libraries, such as
Khudabaksh Oriental Library, Patna and Arabic & Persian
Research Institute, Tonk/in etc; near future.

Visual and Slide Collections :

        A concerted effort is being made to establish a large
photograph and slide library. The focus is on developing a
resource centre where documentation on Indian and Asian Art is
easily accessible. The library has acquired more than 34000
important slides from the Collection of the Oriental & India

office, British Library, London (previously Oriental Collection & IOLR), Chester Beatty Library, Dublin, Ashmolean Museum, Oxford, Victoria & Albert Museum, London, Berlin Museum, American Committee for South Asian Art has also gifted complete set of slides.

Film, Sound & Video Collection :

A beginning has also been made in the developing a library of documentary film in the IGNCA's thrust areas, Video documentation of 'Somayagna' has been received. Similarly an audio library with recordings of Thakur Jaideva Singh on music has been started.

Due to Sound Collection Development Policy, The Reference Library of IGNCA already has more than 80,000 volumes within the short span of 5 years of IGNCA's existence. 85,000 Microfiches, 1000 Microfilm Rolls, about 42,000 Colour Slides, 3,800 Photographs, 265 Gramophone Records, 208 Video Cassettes, 113 Audio Cassettes, 147 Spool Tapes and 4 Documentary Films are the non book materials added in these 5 years.

Problems :

While developing Collection in the above areas, some of the general problems encountered with special reference to Southeast Asia are enumerated as under :

(1) Non-availability of sources from where selection for Collection Development in South & Southeast Asian Art can be made. The available sources are fragmented.

(2) Problems in establishing institutional contacts with institution in Southeast Asia.

(3) Difficulty in collecting catalogues of art institution on Southeast Asia.

(4) Enlisting cooperation from standard. publisher is not encouraging.

Proposals :

Keeping in view of the above, perhaps the following proposals may help in overcoming the difficulties :

(1) The person(s) connected with Collection Development should make frequent survey of those areas where material on South & Southeast Asian Art are available.

(2) Design & Development of databank relating to information (in all forms) on South & Southeast Asian Arts through networks are need of the hour.

(3) Establishment of institutional and personal contacts at more than one level.

Reference Library over the years looks forward for a commendable role for IGNCA in Collection Development on South & Southeast Asis through the efforts of learning and sharing among the art libraries in this part of the world.

Acknowledgement

I express my sincere gratitude to Dr. (Mrs.) Kapila Vatsyayan, Member Secretary, IGNCA for allowing me to present this Paper. I thank Ms. Maggy Wishaupt, Chairperson, IFLA Art Libraries Section for accepting this paper for presentation. My sincere thanks to Dr. T.A.V. Murthy, Librarian, IGNCA for his valuable guidance in preparation of this paper.

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Division: SPECIAL LIBRARIES

Section/RT: GEOGRAPHY AND MAP LIBRARIES

65 - GEO - 1 - E

E

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

Map Collection of the National
Library and its Users' Pattern.

Dr. D.K. Mittra,
Deputy Librarian,
National Library
Calcutta (India)

and

Shri A.K. Ghatak,
Assistant Librarian,
(Map Division)
National Library,
Calcutta (India)

For internal use only:

Meeting No: 117

SI: yes/no

Estimated number of participants
a the meeting:

Map Collection of the National Library & its Users Pattern.

Introduction :

The National Library, Calcutta formerly known as the Imperial Library, Calcutta, is an institution recognised by the Government of India as a very special establishment cevoted to the promotion of Library services in the country.

The history of the National Library broadly falls into three distinct periods. The first period was the starting of library services by the Calcutta Public Library. The next period was merging of the Imperial Secretariat Library with Calcutta Public Library and forming the Imperial Library. Then in the third phase, just after independence the National Library was formed by an act of the parliament entitled Imperial Library (change of name) Act of 1948.

From the early set up of the Calcutta Public Library and later upto the formation of the Imperial Library, maps and atlases were deposited gradually from various sources, which formed the core of the collection. The Imperial Library was declared open for the public in 1903. It was intended that the library should be a place of reference, a working place for students and a repository of materials for future generation. By 1909, the figure of map collection was 936. A catalogue was published in 1910.

The library has more than two million documents comprising of books bound volumes of periodicals, manuscripts, Indian & Foreign Official publications including maps and atlases. This is a depository library under the Delivery of Books and Newspapers (Public Libraries) Act, 1954 as amended in 1956 and a repository of all reading materials published in India. The map collection was 1800 in number by the time when the National Library started functioning in 1953 and with the introduction of D.B. Act 1954, the maps were received in great numbers. In 1961, it had 4,535 maps which rose to 19,594 in 1965. To-day the number is about 80,000 by the help of Act, purchase and Gift & Exchange.

Formation of Map Division

A separate Map Section was formed in 1959, with an area of 1000 sq.ft. and later on shifted to Annexe Building in 1962. With a space of 2,000 sq.ft. Map Division was formed on the Western side of the ground floor of the building. The Division is surrounded by Rare Book Division towards the East, Science and Technology Division towards the North and Reprography Division towards the South. The ventilation is from the western side through 14 windows. The ground floor has a ceiling height of 8.5 ft. fixed with florescent tubes of 4 ft. throughout the ground floor. The illumination is 40 foot candles per sq. ft. which seems to be rather low. The space of different functional areas are divided into major heads. Under receiving, sorting, packing and mailing only 75 sq.ft. is used while under processing it is 74 sq. ft. Under conservation (mounting & repairing) it is 48 sq. ft. catalogue area covers 30 sq.ft. The storage area covers highest among all, being 734 sq.ft. The reference table for 4 readers, covers 32 sq.ft. The working staff area covers 500 sq.ft. while Assistant Librarian's working area is only 100 sq.ft. From this it will be clear that there is hardly any space for expansion in coming few years. The staff pattern consists of 3 technical hands and 2 non-technical hands with Assistant Librarian as over all in-charge of the Division. The technical hands have basic library education but without a backgound of geography or any training in cartography. They are constantly advised by the In-charge in dealing day to day work.

Acquisition :

The acquisition policy is to acquire and conserve all significant national production of printed maps and atlases (excluding ephemera).Collection of printed maps and atlases concerning India, published outside comes next in the priority list. Maps of the neighbouring and adjacent countries are also given utmost importance in the acquisition policy. The policy includes the planned and systematic acquisition of

Foreign maps and atlases.

The budget for the acquisition of the reading materials
is Rs. 40 lakh and there is no separate budget year marked
specially for the purpose of the cartographic materials
published abroad. The auxiliary materials consisting of
gazetters, geographical dictionaries, catalogues of leading
map libraries and topical updating journals are purchased
time to time.

Type of collection

The collection ranges from 16th century onwards. Some of
the maps, published till the end of the 18th century were
land surveys especially for revenue and military purposes
which were carried out by the British military survey, are
in the collection. Indian Topographical sheets of early days
at scales of one inch, half inch and quarter inch to a mile
have found a place in the collection. The metric equivalent
scales are now published and majority of such sheets of Survey
of India have been received by this Library. Under the
Delivery of Books (Public Library) Act, 1954, all most all the
maps published in India are received. The subject coverage
is very wide. They include maps on natural resources, population
transport and communication systems, historical events, agri-
cultural production, soil, vegetation, geology, planning and
many more. Indian atlases on various subjects are also there.

The collection of mid eighteenth century manuscripts maps
and plans by some of the renowned early surveyers and map makers
in India like James Rennell, Anthony Polier, Robert Orme, Bartho-
lomew Plaisted, Dennis Morrison, Robert Barker, Capt. Luis de
Gloss etc. enriched the holdings of the Map Division.

The division has acquired some of the National Atlases
either through purchase or from the Gift and Exchange Division
of the Library. In the recent years some of the atlases like
Historical Atlas of South Asia by Swartzberg, Historical Atlas
of Canada, National Atlas of Sri Lanka have been received by
the Gift and Exchange Division.

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Besides the Map Division a fairly large number of maps and atlases are being kept in the different sections and divisions of the National Library.

Some of the rare maps and atlases along with explanatory notes are kept in the Rare Books Division of the National Library. There are about forty-two atlases in this collection. Nordenskiold's "Fascimile atlas to the early history of cartography" and "Periplus" are worth mentioning in this collection.

The Asutosh Mukhopadhyay collection has also twenty-three valuable atlases. Jean Baptiste Bourguignon d'Anville's atlas in French of 1769 is of great value. Sir Jadunath Sarkar's precious collection of maps has also increased the value of the Library's holding. These maps are indespensable for proper appreciatio.. of the geographical basis of the late Mogul and early British periods of Indian History.

Fifty-three atlases on different aspects are kept in the Main Reading Room of the library for ready reference of the users from all walks of life. Government Publication Division holds some important statistical atlases and census atlases published by the Govt. of India and as well as by the State Governments. Science & Technology, Foreign Official Document Division, Children'Library, Punjabi Division and almost all divisions possess few number of atlases.

This Library is a repository for the publications of the UNESCO. Maps and atlases which are sent to this Library under this programme are also added to the collection. This has helped area coverage to a great extent.

Readers Service,
Users and their variation.

The general service includes servicing from searching a map in a journal to supplying a base map for a project work. Reprographic services are given by another Division, provided the document is not classified or a large scale map. Special services are also given to the Government of India by lending out a particular map.

Systematic record keeping regarding the user e.g. name,

educational qualification, profession, map consulted and
purpose for consulting the map started from November 1980
to study the users pattern and to evaluate it time to time.
Studying the users pattern, taking 450 users into consi-
deration from 1987 to 1991, some broad groups obtained are
shown in the following table:

Sl. No.	Level of users	No. of users	percentage
1.	Research Scholars	160	35.6
2.	Miscellaneous group	126	28.0
3.	Students	117	26.0
4.	Mountaineers & Trekkers	34	7.5
5.	Casual	13	2.9
	Total	450	100

A discussion regarding the needs, approach and characteristics
of each group is relevent in this connection.

Research Scholars:

This group of users mainly belong to geography and geology
discipline, of course scholars of other disciplines also use
maps. Presently this group forms the major number 35.6% of
the total readership. There is marked difference between the
scholars of earth science and others, mainly in their approach
and use.

They have basic knowledge of different types of maps, their
characteristics & specific uses. Quite & large section of them
can explain, what sort of map containing what particular infor-
mation they would like to have. The demand may vary from topo-
graphical sheets of varying scales to thematic maps dealing with
different aspects concerning different area as of India or other
regions of the world.

In case of searching of information for topographical sheets,
it is the common experience that most of them have very vague
idea about the scope and content of such sheets of various scales

They may be able to express how much information in detail they want e.g. about the location of a small place or small hill top or perhaps an ox-bow lake but they are not very sure as to the toposheet of what scale will contain the data of their choice. It is at this point where the map librarian has to play an important part. He may even have to guide the scholars in understanding the map catalogue giving details on coverage of areas on different scales, spot the particular toposheet that will contain the specific information and even help the scholar ultimately in locating the feature on the appropriate toposheet. Normally, scholars of geo-science can then make their way, once they have got the appropriate sheet in their hand and draw their own conclusion.

For seeking information of thematic nature in the form of map, the role of the map librarian becomes more difficult at the same time extremely critical. The demand for the specific information tend to be highly specialised in character and do not often fit squarely among the titles of thematic maps that are available in the catalogue cards. A case may be sited of a researcher who demanded map showing existence of "Inter trappian deposit" in India. Obviously the catalogue cards will not reveal anything about the above deposit. The map librarian therefore has to initiate a dialogue with the seeker so as to know exactly what he means by his querry, what are the possible topics that may contain some information of his choice and then gradually hunt through the possible references to locate the appropriate map. It is quite likely that in some cases no fruitful result will be achieved, but the map librarian can atleast, give the researcher some information on the possible sources for the data that he is trying to obtain.

There are, of course, a large majority of Research workers who can name the specific thematic information that they need, they are also conversent of the limitation of scale and can find for themselves, once the available map on their subject is supplied to them. The map librarian if he can assess the specific need of such researchers, can help them in providing cross-references and also reference for maps, diagrams etc. about which the researcher may not be aware.

Miscellaneous Group:

This group includes retired personnel, tourists, travelogue writers, journalists, business executives and even school teachers. They form about 28% of the total users and have little knowledge of maps which they want to use. They requisition specific map for their purpose and practically they do not have a clear idea about preparing their map either directly or from aby other source. They more or less, require small scale maps to serve their purpose. In small scale maps, unnecessary details are often simplified, generalised and at times modified to some extent. The reliability of a small scale map depends much upon the sources of information from where it has been compiled. At this juncture, the map custodian of the Library helps the users in the right direction for maximum use.

The group requires education of preliminary cartography dealing with scale, cartographic technique, method of representation, methods of reproduction availability of data and multipltiple uses of a single map. Such education can be imparted while in the Library and the map custodian can educate them having knowledge in geography and long experience in the profession. In dealing with this group simple and complex geographical maps are both to be dealt. A population map with a dot method is a simple map but a map showing density of population per unit area of arable land is certainly a complex map. Similarly coloured maps are to be dealt with some caution for this group.

Students:

The Students from 26% of the total map user. This group is divided into two clear sub-groups, viz. the undergraduate students and postgraduate students. The requirements of the uncergraduate student, of geography are very simple. They consult maps of the area related to their field report or of their course of study. As they start learning cartography from this education level, perhaps they do not require any more education on cartography. For their simple demand, they seek the help of the map custodian in their research. They, in terms of education can be encouraged to visit and use the maps as much as possible so that in due course of time they become regular user of maps.   111

The picture of postgraduate students of Geography is slightly different. Not only they visit the Division more frequently for some reference or the other, they use maps for long duration and at times with number of maps of various subjects. While they choose the map themselves for their particular use, they sometimes incorporate information for their better use. Of late, they have developed a taste of using thematic maps & atlases. Being in the present education level they want to fit in themselves for the future days and knowing that thematic maps are now playing important role in development & planning, they study the technique of modern thematic mapping portraying the complex socio-economic systems.

Regarding the education of the users of this student group much depends upon the course of cartography at their education level. It is a fact, that there is a considerable divergence in approach to cartographic education in Indian Universities. In India, cartography is taught along with geography. Only in recent years, a syllabus has been made for Postgraduate degree course in cartography with two years duration. The Survey of India, Hyderabad is imparting training and it is expected that standard of cartography will be at par with International level.

Mountaineers & Trekkers:

Among the map users, this group forms 7.5% of the total readership. This number was remarkably high in the early eighties. This was due to the fact of acquiring the Mountaineering Atlas of the World vol. II(Japan) in which Himalayan area has been included. From 1985 onwards this number started decreasing gradually. Bhuruka Foundation Trust is an organisation, now largely responsible along with other associations and clubs of the climbers in supporting the mountaineers and trekkers by supplying them the required maps, information and equipments.

The mountaineers may be classed as a special category of map readers because of the fact that they have an intimate knowledge by virtue of their field visits of the mountainous areas for which they seek further information in the map.

What they lack is, an idea about the scale of the map, significance of different symbols, contour patterns etc., & therefore the concept of the terrain is not very clear to them by having a glimplse at the map. It is on this point that they need the help of the map librarian who can interpret to them the total effect of the symbols & contours. But, once they get to know preliminaries and identify certain spots known to them on the map, they can very quickly, thereafter follow the maps in general. However, most of them still need the help of the map librarian in assessing the possible slope patterns, glacier conditions, morainic platforms so that they can decide upon the routes of trekking or scaling the peak while in the field. The map also gives them an idea of the panaromic view of the area around the peak in which they are interested. This perspective is very helpful in identifying the peak in the field.

Casual:

The last group only 2.9% of the total user. They include lawyers, bankers, biographers, with a slant towards literatur?, rural electrification board and trainee air pilot etc. Neither these users know much about the maps nor they are satisfied. They make some notes as per their interest and return the map within shortest possible time. If by chance, they do not get it, they somehow manage their work even without a map. It is somewhat like "Try Your Luck".

It is observed & felt that if this group of users stay a little longer, some arrangements can be made in the Library itself in order to solve their problem. They even can be verbally educated regarding the maps for which they will be benefitted.

Conclusion :

Maps as a special non-book material represent one of the oldest forms of information and communicatioh known and are immensely valuable reference tool. National Library with its collection of maps can cater to multidisciplinary and diversified research. Automated systems of non-book material can help in strengthening such facilities. The National Library

now needs to establish co-operative ventures with other
National Libraries and major map collections of India and
abroad. Such efforts will broaden the horizon of the
present services being rendered within the limited resources
and infrastructure. Positive steps in that direction will
be the future trend of activities of the National Library.

IFLA GENERAL CONFERENCE . NEW DELHI 1992

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SECTION: Geography and map libraries

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RUSSIAN MAPS OF ASIA

by

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N.Ye.Kotelnikova

RUSSIAN MAPS OF ASIA

Russian cartographers have made a contribution of honour to the study of Asia. The present report affords no exhaustive information about cartographying Siberia and contiguous territories, but it reflects main stages of the creation of maps for this region.

The initial period of the study of the territory beyond the Urals fell on the end of the 16th and on the 17th century when the strengthening of the Russian feudal state took place and when its boundaries began moving towards the East and the North of Asia which was well indicated in the "Atlas of geographical discoveries in Siberia and North-Western America" (1964). The Russian government would receive plenty of information about the newly gained land as well as data on the adjacent Eastern countries. Draughts of Siberia, composed by foreigners according to Russian eyewitnesses, were known to be in existance ever since the second half of the 16th century. They were highly schematic. In the 17th century Russian draughts of the Siberian land began to appear. The digestion of these territories went on especially actively in the end of the 17th century. Russian trail-blazers in Siberia belonged to the military class, Cossacks, trappers. They were no cartographers, but they were charged with composing descriptions and draughts of the newly discovered and visited land. In many respects their surveys were primitive, they did not abide by the orientation by the cardinal points and assumed tales of the natives as bases for composing draughts.

The Draught book of Siberia (1701), compiled by the boyar's son Semyon Yemelyanovich Remezov of Tobolsk with his sons, can serve as a true monument of the ancient Russian cartography of

that period. It was a Russian atlas of Siberia, which gave an authentic and detailed historic and geographical, cartographic characteristic of the territory. Its creation allowed the government to receive dispatches from Siberian regions and thus affect the improvement of the condition of the entire territory, rule over it.

A. Midendorf, a honorary member of the imperial academy of sciences, appraised it highly (1860). He pointed out that although the atlas had no mention of either longitude or of latitude, it afforded a relative notion of distances in both inhabited and uninhabited places of Siberia, the rivers were shown in the size of the little finger and lakes were depicted in the form of the half moon or of the full moon and the atlas contained plentiful information of great value. It concerned the accuracy of the depiction of settlements in the Tobolsk area on the Enisei. Tributaries of the Ob were shown carefully. The obtained materials permitted to intensively master the new territories.

The further blossoming in the study of Asia was bound up with expeditions towards the North-East. They entailed the more precise definition of the configuration of Chuchchee peninsula, the discovery of both a cluster of islands in the Arctic ocean and the ridge of the Aleutian and Kuril islands.

On the initiative of Peter the first systematic work was undertaken in order to study the inner parts of the country with the purpose of creating a general map of Russia. In the senate it was I.K.Kirilow who led the surveys. He composed the "General map of the Russian empire" (1734) which rendered the configuration of the North-East of Asia in detail. This portrayal of Asia remained in the atlas of the academy of sciences

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(1745) too.

The new stage of the study of the Asiatic part of Russia was tied up with the great Siberian-Pacific expedition of V. Bering and A. I. Chirikov (1724-1743). It resulted in the study and accurate cartagraphying of the North-Eastern Asia and in the discovery of the way to America and of the Aleutian islands.

The following stage in the cartographying of Asia was connected with the names of naval officers I.F.Kruzensthern (Kruzenstjerna, and Yu.F.Lisyanskiy (Lagidovich, 1967,. Kruzenshtern was appointed chief of the first expedition round the world. Yu. F.Lisyanskiy was attached to Kruzenshtern's expedition in the same year. Kruzenshtern was in command of "Nadezhda" ship and Lisyanskiy was in command of "Neva" vessel. The ships sailed different courses: Kruzenshtern to Petropavlovsk-Kamchatskiy and Lisyanskiy to the Russian America. By no means everyone knows that count N.P.Rumyantsev actively promoted and financed Kruzenshtern's expedition, whose book and cartographic collections underlay the Russian State Library, former Lenin State Library of the USSR. He rendered energetic help during the organisation of Russian voyages round the world. The "Atlas to the tour of Mr.Kruzenshtern round the world" (1809-1812) including maps of the North-Western part of the Great or Pacific ocean, the Japanese and Kuril islands, the island of Sakhalin as well as magnificent engravings with viwes of towns, ethnographical sketches, portrayals of birds, the sea fauna and flora ensued from Kruzenshtern's voyage. The atlas featured preminently sketches of the natives - Aleutians and Kamchadals.

Having completed the first voyage round the world and returned to Russia in 1806 Lisyanskiy put out at his own ex-

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pense a description of his voyage and the atlas "Collection of
maps and drawing belonging to the voyage of the fleet captain
and cavalier Yurij Lisyanskiy on "Neva" ship" (1812).

Besides sea voyages to America and round the world in the
19th century the regular survey of Siberia set in carried out
by military topographers. In 1825 the military topographic depot
brought out the "General map of the Asiatic Russia", compiled
by lieutenant Pozdniyakov. The map contained precise hydrograp-
hic network, outlines of the coastal line of the Arctic ocean
and of the Pacific ocean, frontiers of provinces, regions, routes
of Russian seafarers. Besides the map showed the territories in-
habited by natives -- Samoyeds, Ostyaks, Yakuts, Tungus and others.
The map was executed on a scale 100 versts in one inch (1:4 200
000).

According to A.V.Postnikov (1985) from the beginning of the
18th century on the rivers gripped intent attention on the part
of the Russian government as the interests of the state called
for broadening and deepening data on the nature and economy of
the separate parts of the spacious territory. In this connection
the hydrographic network was carefully plotted on maps of the
Asiatic Russia. Especially actively the hydrographic works star-
ted developing in the second half of the 19th century when sail-
ing directions appeared. They were general maps of rivers with
plans of separate sections of the waterways attached. As an examp-
le the spendidly published "Atlas of the portage from the city
of Bodaybo on the Vitim to the village of Narundukan on the up-
per Angara" could serve. It was composed by the hydrographic ex-
pedition of the lake of Baikal commanded by colonel Drizhenko
(1902). A detailed description of the portage Bodaybo - the up-.

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per Angara opened the atlas. Sheets of large scale maps followed which characterized both the river and its riverside strip.

On a level with hydrographic maps road maps began appearing in the same period. One of such road maps was the "Military road map of the Asiatic Russia" (1895), executed on a scale 1:2100000. The map had a special character indicating distances between railway stations and points with the accuracy of up to a fourth of a verst.

The Russian geographical society, founded in 1845, fulfilled significant work in Siberia. Valuable cartographic materials of little studied and unstudied areas were obtained by the expedition for the study of the Eastern Siberia and the Amur region in 1855. Such savants as NA Severtsev, N.M.Przhevalskiy, P.P. Semenov-JienShanskiy, G.N.Potapin and others took part in the expedition.

The development of the captalism in Russia necessitated a profounder study of the entrails of the earth and of the economy in Siberia. In the 19th century and in the beginning of the 20th century the subject cartography started to develop, economical maps appeared. Mining and industrial maps developed first and foremost, they showed deposits of minerals and works situated in Siberia.

The "Atlas of the fatherland" (the second part Siberia and Turkestan), composed by N.N.Tornau, came out in 1907. This small economic atlas served as a teaching aid, but as far as the thoroughnes and complexity of the maps as well as the originality and fullness of the statistical material exceeding its frame work were concerned it could be regarded as a complex atlas. For the first time the atlas gave a complete economic characteristic of

the Asiatic Russia. Its general economic maps paid special attention to the revelation of natural resources of the region. Besides the atlas included maps and statistical surveys of other states of Asia-Mongolia, the North-Eastern part of China, Korea, Japan. It corresponded to Russia's economic interests in the East.

The "Atlas of the Asiatic Russia" (1914) ranked among the best attainments of the Russian prerevolutionary cartography. The atlas was published in three volumes by the migrant administration with an extensive and richly illustrated text attached Results of big work of different organisations and separate Russian scientists were reflected in the contents of the maps and the covering text.

The section about the history of the cartography of the Asiatic Russia introduced the atlas, followed by historical maps showing Russia at the time, when the Romanovs ascended the throne and when Peter the Great mounted the throne.

The economic maps made up the bulk of the atlas. The central section of the atlas contained maps of concrete provinces and areas with the general picture of the landowning and land-tenure shown. Here were results of the ten-year activities of the migrant administration concerning the settling of migrants. The map of trades or prevailing employments was of interest.It indicated the division of the territory in four areas by different colours of the background: the predominance of the agriculture; the agriculture and the cattle-breeding, the predominance of the cattle-breeding; the development of the Northern reindeer-breeding. Areas of the butter manufacturing, fishing, hunting were marked out by additional hatching in the same

place. The forests were represented on a separate map together with their distribution in compliance with their economic appurtenance. The agricultural cartogrammes indicated the specific gravity of diverse cultures in the tillage. The atlas lacked any industrial maps as the interests of the migrant administration called forth it. For the first time in the atlas cartography there were maps of areas of the watering agriculture - from large scale maps (Murgab "Czar's estate", scale 1:168000) to small scale ones (the watering land of the entire Turkestan, scale 1:3 360000). In spite of their versatility the maps supplemented each other, they were mutually coordinated and compiled in a single aspect.

Thus on the eve of the first world war the Asian part of Russia was mapped out rather well and not only its general geographic maps and atlases, but subject ones were compiled too.

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Introduction :

India is a vast country with 850 million people and with an area of 3.28 m.Sq.Km. Its diversity in landscape is unique with highest mountain ranges, great plains, rugged plateaus and high-lands, large deserts and long coastlines. Population density varies considerably from state to state. The work of exploring this great land and plotting it in the form of map started way back in 2nd Century A.D. When Claudius Ptolemy prepared an atlas containing 54 maps of the then known world. Ptolemy's map of India and Ceylon in a map of Asia was regarded as authentic for the next fifteen hundred years though it was far from accurate.

Apart from Ptolemy's map of India, important contribution in respect to geography and map-making in India were attributed by Chinese travellers Fa Hien and Hiuen Tsang who visited India during the 5th & 7th Century A.D. respectively. An important contribution in this direction was made by the European traders and travellers who frequently visited the Indian sub-continent around the 13th & 14th century. In this context mention may be made of Marco Polo who travelled extensively in India and wrote detailed account of his travel in 1293 A.D. based on which Abraham Cresques had prepared a map of India in 1375 A.D. From 9th to 13th Century a succession of Arab travellers left their account of India but these were mainly in the form of diagrams rather than maps. Notable among these works is the "Arab Map of Sind" by Ebu Hankel which is supposed to have been made in the 11th century and reproduced in the "Historical Records of the Survey of India" Vol. I by Col. R.H. Phillimore. Early Indian rulers also felt the need for map-making since it helped them to assess the lands fit for cultivation. In this context mention may be made of Rajaraja of Tanjore (985-1011 A.D.) and Raja Todar Mall, Akbar's revenue minister (1556-1605).

The newly developed printing techniques during the 16th century prompted many European geographers to publish atlases on India and Asia though they are not free from errors since they were based on Ptolemy's Geographia.

Actual map-mmaking on the basis of land survey started in 1767 when Robert Clive appointed James Rennell as The First Surveyor General of Bengal and with the formation of the survey of India. Since then Indian map-making travelled a long way to enter the present day modern technology of digital map making. The intention of this deliberation is not to dig into the history but to highlight the maps and atlases published in India.

Types of Maps Published in India :

Till independence map making in India Centered around the history of Survey of India. After that different types of maps and atlases are being prepared and published in this country. Map-making and its publication are mostly controlled either by Central Government Organisations or by State Govt. agencies. Private publishers are very few in numbers and they too are engaged in publishing school atlases or very general and common type maps and atlases of thematic or planimetric nature. Some research organisations and the geography departments of many universities also prepare and publish maps or atlases on various socio-economic or environmental aspects.

Major categories of maps and atlases published in India can be grouped as follows :

      Topographical maps

      Cadastral maps or village maps

      Thematic maps

Topographical Maps & The Survey of India.

The Survey of India is the only organisation in the country responsible for the task of preparing and publishing topographical maps. Land survey & mapping in modern India started with the appointment of Major James Rennell as the Surveyor General. Though detailed topographical survey was started by Colonel Colin Mackenzie, yet the work of mapping India on scientific lines through the Great Trigonometrical Survey began when Major William Lambton started measurement of the Madras base line in 1802 (Rennell's land mark works include "Map of Eastern Parts of Hindoostan" in 1776, "Bengal Atlas" in 1779, "Map of Hindoostan" in three editions 1778, 1792, 1793.) In 1818 Lambton's survey was designated as the "Great Trigonometrical Survey of India". George Everest took up the task of geodetic triangulation after the death of Lambton and extended his observations up to the foot of the Himalayas thus completing the triangulations series from Cape Comorin in the south to the Himalayas in the north.

In 1878 all the three branches of the survey namely trigonometrical, topographical and revenue were amalgameted into a single department namely the survey of India.

Till about 1905 the original surveys carried out by the Survey of India were mainly for revenue purposes. But since 1905 it concentrated wholly on the production of a new series of multicoloured topographical maps for the whole country on 1 inch to the mile scale. Later it was changed to 1 inch to 2 miles and 1 inch to 4 miles for remote areas and for Himalayan regions. These were termed as "Modern Maps." In 1905 the survey of India established its own photo litho press in Calcutta to print its modern multicoloured maps by offset process.

The technique of surveying from aerial photographs was first introduced in the Survey of India 1925. After the Second World War nearly all topographical and project surveys done by this department are almost entirely from aerial photographs. In 1952 it acquired the photogrammatic machines and by early 80's it had acquired the computed cartography system. Recently it has set up its digital mapping unit.

After introduction of metric system topographical mappings is done mainly at the scales of 1:50,000 and 1:25,000 and at larger scales. Smaller scale i.e. 1:250,000 topographical maps also exist which are however of older dates. Almost the entire country has been covered on 1:50,000 scale and now it has concentrated its work on producing topo map on 1:25,000 scale.

Beside preparation of topographical maps of all kinds the Survey of India publishes other maps like general maps (physical political, railway, road on small scales, state maps on 1:1 million scale, large scale city guide maps, trekking & tourist maps, I.C.A.O. charts and Internatonal Map of the world. The Survey of India also renders consultancy service and undertakes project work for government and other agencies.

Cadastral Map & Directorate of Land Records & Survey Offices :

From 1905 on, Cadastral surveys became the responsibility of provincial administrations, based on the trigonometrical framework of the survey. Every State Govt. has its own land records and survey unit. It prepares large scale cadastral maps or village maps in black & white depicting land holding numbers, highlands, arable lands, residential land, waterbodies, Orchards etc. Cadastral maps are prepared in various scales, ranging from one inch. to 50' feet,

128 inches. to the mile, 64 inches to the mile, 32 inches to the mile & 16 inches to the mile. Presently the land records offices are shifting in metric system and the scales are 1:1000, 1:2000 & 1:4000. Police Station maps published by these offices bear three scales, i.e. 1 inch to a mile, 4 inches to a mile and 1:25,000. Districts maps are prepared at 1 inch to 4 miles scales and state maps are at 1 inch to 32 miles, 1 inch to 16 miles and 1 inch to 8 miles scale. Sometimes these land Records Offices produce other type of maps or even atlases such as the Directorate of Land Records, Madhya Pradesh Govt. brought out an atlas of agro-economic conditions of the State. Twenty five plates of maps and charts in this atlas depict climate, soil, physiography, land utilisation of this State. Govt. as well as common people are the users of these maps. Govt. uses these maps for revenue settlement and land acquisition purposes while people uses these maps for consulting their own land holdings.

Thematic Maps :

Apart from topographical & geographical maps published by the Survey of India and cadastral maps prepared by the Offices of Land Records & Survey thematic maps have taken an important role since independence. A wide variety of subjects or themes of socio-economic concerns, business patterms, weather, population, natural resources, environmental aspects and historical themes among many others are portrayed by thematic maps. A number of government organisations, a few private commercial agencies, a considerable number of research organisations and geography departments of various universities publish thematic maps and atlases regularly or occasionally.

In the last two decades of the 19th century two statistical atlases were published from Calcutta by the Department of Revenue and Agriculture. Indian Tea Association, Calcutta published a map of tea districts of Assam and Bengal in 1902 on 1 inch. to 8 miles

scale. Meteorological Department published some climatological
atlases from Calcutta, Pune, Delhi & Shimla in 1906 to 1938.
Three crop atlases were published in twenties & thirties by the
Commercial Intelligence Department from Calcutta.

Soon after independence an effort for the preparation of
regional atlases started and first work in this direction came
out in 1949 when Prof. S.P. Chatterjee, Head of the Department
of Geography, Calcutta University produced "Bengal in Maps: A
Geographical Analysis of Resources Distribution in West Bengal and
East Pakistan" which was published by Orient Longman. It was followed
by "Regional Atlas of Bihar" prepared by Dr. P. Dayal to show the
geographical distribution of the resources of Bihar and was pub-
lished from Patna in 1953.

Some atlases were published in quick succession in fifties
e.g. India in Maps by the Ministry of Information & Broadcasting from
Delhi in 1950; Atlas of Livestock & Livestock Products by Ministry
of Agriculture; Indian Agricultural Atlas in 1952 by the Directorate
of Economics & Statistics; Health Atlas of India by the Director
General of Health Services in 1953; Power Atlas of India in 1956
by the Ministry of Irrigation & Power; Cotton Atlas of Indian in
195 by the Central Cotton Committee, Bombay; Oilseed Atlas and
so on.

But the most important & significant work in the fifties is
the publication of National Atlas of India in Hindi in 1957 by
Prof. S.P. Chatterjee. The National Atlas & Thematic Mapping
Organisation was born in 1956 which has taken a major role in
thematic map-making in the country.

The important publication in the sixties include one regional atlas namely the Atlas of Resources of Mysore State published by the Statistical Institute, Delhi in 1962, was prepared by Dr. A.T.A. Learmonth with contributions from V.L.S. Prakash Rao, L.S. Bhat, M.N. Pal and S. Satyanarayana. Census atlases started coming out from mid sixties which added significant dimension to the thematic cartography. Indian Council of Medical Research published a Diet Atlas of India in 1964 from Hyderabad which depicted consumption patterns and other aspects of diets and calories intake districtwise. Indian French Institute, Pondicherry in collaboration with Indian Council of Agricultural Research, New Delhi took up a project of publishing International Map of the vegetation & on the environmental conditions in 1962. Under this scheme some maps on Cape Comorin, Godavari, Jagannath etc. were published on 1:1 million scale during the sixties.

During the seventies apart from the production of the important map-making agencies some maps and atlases were published from other agencies most notable of which is one regional atlas namely "Planning Atlas of Andhra Pradesh" edited by Prof. S. Monzoor Alam in 1976. It was prepared by the Geography Department of Osmania University and cartographic assistance was extended by the Survey of India. This atlas won three national awards and was acclaimed by the geographers all over the world, Other works include Flood Atlas of India published by the Central Water & Power Commission, New Delhi in 1971; Indian Literacy Atlas was published by the Central Institute of Indian Languages, Mysore in 1978.

Some more regional atlases were published during the eighties. Basic Resources Atlas of Tamil Nadu edited by Prof. A. Ramesh was prepared by the Geography Department of Madras University and was funded by the Science & Technology Department, Govt. of India came out in 1982 from Madras. The work of two other state planning atlases namely the Economic Atlas of Kerala & the planning Atlas of Gujarat were under-

Bureau of Economics & Statistics,Gandhinagar respectively. The Central Arid Zone Research Institute, Jodhpur published Ground Water Atlas of Rajasthan and also Agro-Economic Atlas of Rajasthan. A praiseworthy work, the River Basin Atlas of India was produced by the Centre for Study of Man & Environment, Calcutta which was published by the Central Board for the Prevention & Control of Water Pollution, New Delhi in 1985. Another important work in the eighties was an Atlas of the Mughal Empire by Prof. Irfan Habib which was published by the Oxford University Press, New Delhi in 1982. An Atlas of Tribal India edited by Prof. Moonis Raja and published by the Concept Publishing Co., New Delhi came out in 1990.

Some Important Government Cartographic Organisations.

Geological Survey of India :

This organisation is the second of the oldest (1851) and third largest geological survey of the world and is responsible for acquiring all kinds of geo-scientific data of the land and offshore areas by geological and mineral surveys throughout the country. As a part of the dissemination of scientific information the Survey has been bringing out geological and other thematic earthscience maps and atlases on various scales initially as part of its Records and Memoirs and other as independent publication. Earlier it had to depend on the survey of India and other private presses for printing but after 1975 it has set up a well equipped Map Printing Division at Secunderabad. The different types of maps published by the Geological Survey of India are broadly grouped as follows :

1. Geological Quadrangle Maps (1:250,000/253.440)
2. Geological and Mineral Maps of States (1:500,000)
3. Geological & Mineral Atlas of India (1:1,000,000)
4. Geological and Mineral Maps of States and Regions (1:1,000,000)
5. Geological and Mineral Maps of States (1:2,250,000)
6. National Maps (1:2,000,000)
7. National Maps (1:5,000,000)
8. Miscellaneous Maps   131

Latest publications include Bouguer Gravity Atlas of Western Indian Shield; Isotopic age map of India and Geological Map of Himalaya in 5 sheets.

Several of the individual states have long established geological departments which publish maps along with records, bulletins, journals for their own states.

National Atlas & Thematic Mapping Organisation :

National Atlas Organisation was established in 1956 and in 1978 it assumed its present name. Its founder director, an internationally reputed geographer Prof. S.P. Chatterjee has considerable contribution in the field of thematic cartography. The main functions of the organisation are compilation of National Atlases in English & Hindi, preparation of the National Atlas maps in regional languages, preparation of thematic maps based on research studies on environmental aspects and their impact on social & economic development, preparation and compilation of landuse and land capability maps etc.

Major publications of N.A.T.M.O. are as follows :

Bharat Rashtriya Atlas (Hindi) in 1957 contains 26 plates on 1:5 M scale;

National Atlas of India (English), contains 300 maps on different scales, published in 1982 in 8 volumes;

Irrigation Atlas of India, contains 35 plates on various scales, published in 1972;

Tourist Atlas of India in 25 plates on 1:1 M & 1:6 M scale, published in 1974;

Atlas of Forest Resources with 35 plates published in 1976;

Atlas of Agricultural Resources contains 35 plates, published in 1981.

Other works include Atlas of Water Resources, Geo-economic Survey, urban studies and publishing monographs etc. During eighties it has published a number of taluk and district level Landuse maps on 1:50,000, 1:100,000 & 1:250,000 scales. It has published an "Atlas of the city of Calcutta and its Environs" in its Special Atlas Series Programme in 1990 on the occasion of Calcutta's 300 years.

Presently this organisation is concentrating on district level planning maps on fairly large scale and this is a programme designed to help grass root level programmes. Work for setting up of a digital mapping unit in Calcutta is in progress.

Office of the Registrar General & Census Operation :

Map Section of this office is a major map producer of the country. It all started when in early sixties a programme of publishing census atlases of States, Union Territories and for the country as whole was taken and volumes under this programme were published as "part IX" of the complete set of reports in various series during 1961 and 1971 censuses and spand included as "part XII" of the general census publication plan for the 1981 census. An uniform plattern is followed more or less. General administrative and physical aspects demographic trends, economic aspects such as agriculture, industries, employment conditions etc. caste-tribes, religion, housing health condition, regional divisions are portrayed in colour and black & white maps but, scale varies according to the size of and area of the states. Substantial text accompanies most of the maps and data sources are given.

The programme of publishing Administrative Atlases for States/ Union Territories undertaken in 1971 census has been continued. The Administrative Atlas contains maps published in the various District census Handbooks together with a brief demographic profile

of the State/Union Territory concerned. 1981 Census Administrative
Atlases are being brought out in the case of the states and the
Union Territories the governments of which have opted for them.
Atlases have been published based on 1961, 1971 & 1981 censuses and
its publications are widely appreciated.

National Remote Sensing Agency :

This organisation was founded in 1975 and acts as an autonomous
body under the Department of Space. It prepares maps by interpreting
aerial photographs and satellite imageries. It has prepared maps of
forest covered area of all the districts of India by interpreting
imageries. NRSA prepares maps for different government and other
agencies.

Indian Meteorological Department :

This organisation is under the Department of Science &
Technology and publish weather daily weather map of the country.
It has published a number of atlases which include Climatological
Atlas of India in 1906, Meteorological Atlas of the Indian Seas
and the North Indian Ocean in 1908, Cloud Atlas in 1937, Rainfall
Atlas of India in 1971, Agro-Climatic Atlas of India in 1978 &
Climatological Atlas revised edition in 1981.

Non-Government Map-making Organisations.

Private agencies are very few in number in the field of map
production. Before independence school atlases or wall maps were
imported or published by Foreign Firms mostly. From the early
fifties Indian Firms started publishing maps & atlases for educa-
tional purposes. Following firms deserve mention :

Tamilnad Printers & Traders Pvt. Ltd., Madras :-

This organisation started publishing maps and atlases from
1964-65 and has been publishing school atlases in different languages,
wall maps, city guide maps, road maps, tourist maps and other   12 /1

thematic maps. It prints maps of other government and private
organisations also & it is the biggest private cartographic firm
in the country.

Chandy Churan Dass & Co. Pvt. Ltd., Calcutta :

This firm prepares globes in different Indian languages, wall
maps of the world, Asia & India, School atlases is English & Bengali,
Historical Atlas in English & Bengali of school or college standards.

Besides these, firms like Indian Book Depot & Map House,
All India Educational Supply Co. and Foreign Firms like Oxford
University Press, Allied Publisher, Orient Longman etc. are publish-
ing regularly or occasionally school atlases, historical atlases
and economic atlases mainly for the school & college students. In
every state some small firms are bringing out school atlases, wall
maps & state maps in regional languages.

Besides the above mentioned organisations, agencies and firms,
many other government, semi-government and autonomous organisations
have been publishing thematic maps in the country. For example
National Geophysical Research Institute has published "Bouguer
gravity Anomaly Map of the Western ESCAP Region" for United Nations.
Another UNESCO sponsored project Plankton Atlas was undertaken by
Indian Ocean Biological Centre under the National Institute of
Oceanography and was published in 1968. Anthropological Survey of
India has published a Tribal Map of India in 1961., The I.T.D.C.
and tourism departments of state governments publish tourist maps
of cities & towns. State Forest Departments, Urban & Town Planning
Department, Municipal Corporations also prepare & publish maps.
All India Automobile Association and Eastern India Automobile
Association publish Motoring Guide. Geography Departments of several
universities are experimenting multidisciplinary complex thematic
maps or preparing atlases.

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Conclusion :

This account is neither exhaustive nor complete. But it is strongly felt .that there must be co-ordination between different map-making organisations to avoid duplication of work. Private firms should come forward to publish more maps and atlases of diverse field of socio-economic, cultural & environmental interest.

A. K. GHATAK
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MAPS & PRINTS DIVISION
NATIONAL LIBRARY, CALCUTTA.

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Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

Government Libraries in India; An overview

by

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Abstract

Gives the histerical background of Gevernment Libraries in India right frem the beginning to the present state. In spite of the fact that these libraries are lacking facilities like proper accommedation, adequete funds fer purchase of books and journals & latest equipments, they are still imparting efficient reference service. Seme of the big libraries have separate build-ings & are bringing out their own publicatiens regularly of varieus technical/reference services being rendered by them. Gevernment of India have revised the payscales which in turn have created several anemalies which the librarians are trying to get redressed. Application of cemputers te varieus library services is the latest trend in these libraries.

by

M. K. Jain

BACKGROUND

Though in India the origin of Ancient Libraries which were
mostly manuscripts libraries can be traced back approximately to
4000 B.C., but the Government libraries came into existence in 1857,
the beginning of formal British Rule. The Government of India, with
its headquarters in Calcutta, organised a few departments on the
pattern of the administrative structure in England, the deal with the
problem of law and order, collection of revenue & regulations of
commerce etc. For the help and guidance of the officers working in
these departments some statutes, reports & guide books etc. were
collected. As their number increased the collection emerged in the
form of a departmental library. Specialised government agencies like
the Geological Survey of India, Archaeological Survey of India &
Anthropological Survey of India thought of building up their own
libraries in the later past of 19 century, to help their research
staff. At the end of the century the collection of books & Publica-
tions of the Government Departments were put together and a regular
library called Imperial Library was constituted. The entire stock
of Calcutta Public Library (1835) was merged with it, which is now
known as National Library.

Towards the beginning of the 20th Century a Library known
as Army Headquarters Library was organised at Simla for the use of
Defence Services Officers. This Library is now located at New Delhi
and called Ministry of Defence Library. Another landmark in the
development of libraries in the Government of India was the setting
up of the Indian Institute of Agriculture at Pusa (Bihar) in 1905.

Being the topmost institution for the study & research in Agriculture Sciences, the Institute started building up its own library. The Institute now called the Indian Agricultural Research Institute is located in New Delhi. This library has since developed into one of the biggest libraries on Agriculture sciences.

In 1920s the Government of India Secretariat had one library worth the name, called Imperial Secretariat Library, which was first set up at Calcutta and later on shifted to Delhi in 1930s. This library was under the control of the Department of Education, Health and Land. At present this library is known as the Central Secretariat Library and is under the Department of Culture, Ministry of Human Resource Development. Around 1937 a new library known as the Economic Adviser's Library (since merged with the Library of Industries) was built up with a good stock of books on Economics and allied topics under the guidance of Sir Theodre Gregory, the first Economic Adviser to the Government of India. After World War II, the Government of India took up the reconstruction and overall development of the country. A department of Development and Planning and various other departments were opened, particularly those dealing with the economic and financial matters. These departments set up research & statistical wings of their own. The departments of Finance & Commerce were the first to set up such organisations. These two departments also reorganised their libraries during this time to meet the need of development & planning. The libraries of the departments of Labour, Law & Home Affairs etc. also began to be re-organised & developed during this time.

POST INDEPENDENCE

The Indian government, after independence, brought significant changes in organisation and motivation of the government machinery

in the country. Unprecedented expansion and diversification of the activities followed as a result thereof. A large number of specialists in all branches of governmental activities were inducted in service. All at once, a heavy demand for literature, statistical data & intensive reference service was created. All these factors gave impetus in the organisation of more libraries & acquiring rapidly books and publications on all subjects. Qualified Librarians were engaged for managing the libraries. With the expansion of the existing departments and creation of new ones the number of government departmental libraries went on increasing.

Many advisory, research & investigation agencies were created under the Central & State Governments in the country. The introduction of Planning as a strategy for socio-economic development of the country further led to the need for an organised & effective library services. As a result various Ministries/Departments of the Government of India such as Home, External Affairs, Education, Health, Transport, Railways, Food & Agriculture, Communication, Community Development and Cooperation etc. & the Planning Commission started their own libraries. The statutory bodies like the Union Public Service Commission (UPSC) & the University Grants Commission (UGC) built up their independent libraries. The Parliament and the Supreme Court of India also constituted their libraries which are now of considerable size & status

The organisation of the Council of Scientific and Industrial Research and the chain of National laboratories under its auspices resulted into up-to-date scientific libraries. The Indian National Documentation Centre (INSDOC) has now the statutus of a national information centre on Science and Technology. The Research and Development Organisation of the Ministry of Defence started the Defence Laboratories and the Defence Science Information & Documentation Centre (DESIDOC). This centre has attained the status of

National Information Centre on Defence Science. The Library of Directorate General of Health Services has been converted into National Medical Library.

PRESENT STATE

There are now about more than 800 big, medium and small sized libraries spread in all the Ministries/Departments and their Attached and Subordinate Offices. The total strength of libraries in these libraries is 1943 according to 4th Pay Commission Report, 1986. 49% of these librarians are employed in the Department of Education, Culture, Railways and the Ministries of Defence, Information & Broadcasting. Almost every department of the Government of India has a library with at least one post of librarian. Out of 72 Ministries including their Departments, 19 Ministries/Departments do not have their separate libraries. However, their needs are catered to by the libraries of the main ministries or their sister departments etc. The total collection of these libraries is estimated to be 12 million. On a rough estimate the total expenditure incurred on the purchase of publications & periodicals (excluding salaries of the staff) in these libraries is about 25 million rupees.

There was a time when 50% of the libraries were one man libraries but now the situation has vastly improved. At present only 15 libraries have been identified, each of which has only one professional person. Some of the libraries like Central Secretariat Library, Planning Commission library, Ministry of External Affairs Library, Ministry of Finance Library and National Medical Library etc. have reasonably good number of staff both professional and non-professional. The reason for the shortage of staff in the libraries is mainly due to the ban imposed by the Government on the creation of posts & filling up of the vacant positions for the last several years.

Almost all the Government libraries are using Dewey Decimal

Classification Scheme for classifying their material. In cataloguing

most of them are following Anglo American Cataloguing Rules (AACR) &

that too AACR II. In a recent survey conducted it was revealed that

only 3 to 5 libraries are following Universal Decimal Classification (UDC)

scheme and the same number are using ALA Cataloguing Rules. According

to the Survey none of the libraries are following Colon Classification

Scheme. The daily lending of books in the libraries is very much

less except the Central Secretariat Library which is a sort of

Public Library for the Government employees in Delhi. The daily

issue of books & publications in this library ranges from 500 to 1000.

SERVICES

The Government libraries provide an intensive Reference

Service to their clientele. Most of the time the reference questions

are of long range which require searching. Another special feature

of the Reference Service in these libraries is that the library

staff has to provide information out of the Government Publications

such as Official Gazettes; Committee & Commission Reports, Parliamentary

Debates, Census Reports, Gazetteers, Annual Reports, Manuals, Budget

Papers and Acts etc.

The organisational set up of the Government of India consists

of various Ministries which have further departments. These depart-

ments are divided into various Divisions, Branches and Sections.

Section is the smallest administrative unit in government heirachy

which deals with the specific subject in a Ministry/Department. The

Library of the Ministry or Department is generally regarded as section

in the organisational set up. With the exception of a few libraries

which have the status of a Division or Branch all other libraries

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are formed smallest units. In a few cases libraries are formed part of the section itself. In spite of these libraries being smallest units and other handicaps like inadequate accommodation, furniture, funds & staff, are rendering efficient service.

A good number of Government Departmental libraries, individual collections of which reached 1,00,000 and above, have developed into research and reference libraries in the country. These libraries have become specialised libraries in the subject of Ministry/Department dealing with and are able to meet the requirements of their officers & staff. Not only this but scholars & research workers from all parts of the country come & use these libraries for their research work. Scholars from abroad also make use of these libraries. The Government Libraries put together cover all the disciplines of knowledge.

Almost all the libraries are providing bibliographical & documentation services. They are bringing out 'list of New Additions' under classified headings which are mailed to other libraries, thus all the users are well informed about the newly acquired material and the areas of specialisation of each library. Many libraries are offering the following services:-

    (i) Current Awareness Service (CAS)

    (ii) Selective Dissemination of Information Service (SDI)

  (iii) Retrospective Bibliographies

   (iv) Indexing & Abstracting Service

    (v) Digest Service

   (vi) Current Contents Services

  (vii) Article Alert Services

 (viii) Press Clipping Service

A few large libraries are bringing out their regular publications in respect of the above services. Of late the application of computer

to library services is becoming popular. In fact, the computer application is being encouraged and introduced in government libraries. National Information Centre (NIC) under the Ministry of Planning is helping the Ministries/Departments in the introduction of computer. Libraries of Ministries of Defence, External Affairs, Health and Family Welfare, Human Resource Development, Planning, Science and Technology, Parliamentary Affairs, Water Resources and Departments of Atomic Energy, Electronics & Space, are now using computers for various kinds of jobs in their libraries. Central Reference Library, Calcutta is bring out computerised Indian National Bibliography.

ACCOMMODATION

Government libraries are suffering from inadequate accommodation. Invariably these libraries are located within the premises of their respective Ministries/Departments. Some are properly housed and a very few have their own independent buildings e.g. Central Secretariat Library, National Medical Library & Ministry of Finance Library. A large number of them are not properly accommodated which effects their efficient functioning. After Independence, a large number of multi-storey office buildings have been constructed in Delhi & elsewhere, but no efforts were made to design & provide suitable premises for libraries.

INTER-LIBRARY LENDING

Of late there has been a healthy trend of mutual cooperation among departmental libraries. In spite of the fact that every departmental library is primarily equipped to serve its own clientele, there are occasions where the library has to obtain reading material from other libraries. Such reading material is obtained from other sister libraries on 'Inter-Library Loan' without any charge.

CONCLUSION

Majority of the libraries do not have adequate stock of books/publications. The lowest stock of 15,000 is in the PM Secretariat Library. Similarly there are other libraries which have marginally higher than this. The National Library, Calcutta has got the highest stock which is about more than 2 million. The libraries which do not have adequate stock, are not able to retrieve the required material and information at times and they have to depend on the resources of other libraries.

Government Libraries do not have sufficient staff & some of them are manned by one person. This is not only an impedement in coping with the demands of the readers but also takes the library into arrears in respect of classification & cataloguing of books.

Budget allocation for these libraries is meagre except in the case of a few big libraries. To illustrate the difference National Medical Library has got a budget of Rupees 80 lakhs (8 million rupees), whereas the Non-conventional Energy Sources Department library has only Rs.15,000.00. Paucity of funds discourages the libraries to purchase all wanted books and latest equipments.

The shortage of accommodation & the shelving space restricts the proper display of material. This also hampers the seating arrangement for readers where they can sit & read in a calm & quiet atmosphere.

The growth of these libraries has been in a haphazard manner, yet some of them come up very well. It is a matter of pity that the libraries have not been given proper attention which they deserve. On the other hand the libraries which are autonomous & a few libraries of attached and subordinate offices are much ahead than the

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libraries of the main ministries and their attached and subordinate offices.

Despite the above handicaps, the libraries are imparting good services. As mentioned earlier, the daily issue of books is not much in these libraries which fall in the category of special libraries. These libraries can be termed as Research and Reference Libraries. As such they are providing intensive reference service to the officers and researchers. Some of the libraries are bringing out regular publications of their own. It may be pertinent to mention a following few titles of such publications:-

1. Chetna - Quarterly (National Medical Library)

2. Chronicle of Events - Fortnighly (Ministry of External Affairs Library)

3. Diary of Political Events - Monthly (Parliament Library)

4. Digest of Central Acts - Quarterly (Parliament Library)

5. Divisional Documents List -Quarterly (Planning Commission Library)

6. Doc Plan Abstracts - Fortnightly (Planning Commission Library.

7. Documentation - Fortnightly (Parliament Library)

8. Documentation Bulletin - Monthly (Department of Science and Technology Library)

9. Documentation List - Monthly (Ministry of Home Affairs Library)

10. Foreign Affairs Document Bulletin - (Ministry of External Affairs Library)

11. Highlights from Current Health Literature - Monthly (National Medical Library)

12. I & P Abstracts - Quarterly (Ministry of Water Resources Library)

13. Indicative Abstracts - Monthly (Ministry of External Affairs Library)

14.   Journal of Parliamentary Information (JIP) - Quarterly
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15.   Parliamentary Library Bulletin - Monthly (Parliament Library)

16.   Weekly Bulletin (Ministry of Finance Library)

The professional staff working in the Government Libraries have been stagnating and the prospects of their promotion are far from satisfactory. Librarians have been suggesting to the Government of India to constitute a Central Library Service, which is now under active consideration of the Government. On the representation of a few library Association at national level, to the 4th Central Pay Commission, for better pay scales and service conditions, some positive results have emerged. A Review Committee constituted by the Government of India on the recommendation of 4th Pay Commission, submitted its report in March 1989. After taking into consideration this report the Government of India revised the pay scales and issued necessary orders in July 1990. The librarians have pointed out to the Government the anomalies and discrepancies created by the recommendations. The Libraries and Library Associations are trying hard to impress upon the Government to remove the anomalies and thus redressing their grievances. Once this is done by the Government, the library staff will be a happy lot.

In the end it may be stated that the officers, researchers and other clientele of the Government Libraries are more than satisfied by their services, in spite of all the odds.

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Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

Technology as an agent for communication

by

Edward J. Valauskas

Superconducting Super Collider Laboratory Library

Dallas, Texas, USA

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Technology as an agent for communication

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ABSTRACT

The sheer quantity of government-invented information presents a real dilemma to libraries in delivering data in a timely and utilitarian fashion to their patrons. The dangers of technology are evident as a means not to liberate information, but to entomb it. Only by using reliable, unobtrusive, and accessible solutions, based on technological answers that are patron-driven, will libraries overcome the possibilities of digital burial of governmental facts, reports, and resources.

TECHNOLOGY AS AN AGENT FOR COMMUNICATION

Information, sponsored and nourished by government agencies, fills millions of cubic feet of paper, thousands of reels of microfilm, and terabytes of computer tapes. In some governments, 50 percent or more of all staff handle nothing but information, in all of its many forms (1). Government-invented information is expanding over time as well, paralleling the growth of information, in a world where the volume of printed matter doubles every 20 months, where a thousand books are published each day, where nearly 6,000 electronic databases serve 4 million users a day (2).

In response to this burden, governmental agencies have turned to technology, to assist in processing and delivering this mass of data. Technology, in the earliest kinds of counting devices, was invoked at the end of the last century to assist bureaucracies complete their legislatively derived chores in a timely fashion. The United States Census Bureau found itself taking years to produce some reports; the last reports from the 1880 census appeared just two years before the start of the 1890 canvas. With Herman Hollerith's electric tabulator, the Bureau was able to generate a preliminary population report within weeks, and process a mountain of 63 million individual cards in a matter of months instead of years (3). Computers, in one form or another, ever since this feat have been married to government as a vehicle to manipulate and distribute information. Is it working?

In some developed countries, there are as few as 2.5 office workers per computer (4). Does this abundance of computers make information more available? There are some who would argue that computers in government entomb information in a process of digital burial that is so arcane that "people are relieved just to leave it there (5)." This information becomes fossilized; when it is uncovered from its electronic cemetery, it has no meaning. Two hundred reels of 17-year old computer tapes created by the U.S. Public Health Service were destroyed in 1990 because no one understood the contents. The National Aeronautics and Space Administration (NASA) owns 1.2 million reels of computer tape, the result of US$24 billion in research over 34 years. Hundreds of thousands of these tapes are decomposing in poor storage (6). NASA's space

missions in this decade will generate 29 times more data than stored in all of the Library of Congress' 15 million books; no one is quite sure how all of this information will be handled or preserved (7).

It might be argued, then, that computers in government are a means to hide information, rather than a vehicle to liberate it, robbing citizens of their right to see what their governments are doing (8). Public access to government records originated in English and American common law, but specific laws have not kept pace with the widespread digitization of government information. In fact, some courts have decided that access to paper records only is legally sufficient to meet the demands of the populace, that it is not necessary to release information in all formats. Some government agencies use this accessibility by paper as a means to discourage demand for government information, to reduce workloads on personnel by setting high fees for the privilege of access (9). In New York City, for example, the Buildings Department will provide on demand, in paper only, information on local real estate derived from a US$46 computer tape. To secure all of the information on this tape, you will wait six weeks for the city printing shop to provide you with a million pages of data at a cost to you of US$10,000.

In spite of their charter, governmental agencies see digital information as a potential gold mine. The success of the electronic database business — revenues from connect time in 1993 will equal US$5.5 billion — inspire governments to become information brokers (10). These attempts — such as the U.S. Congress' recent effort to sell digital information on maritime shipping for US$21 an hour, while making it available in paper for free — force librarians to remind their governments that access to information is a fundamental right in a democracy (11). What prevents technology from being used to a greater extent to distribute information?

Technology has never been inexpensive, in both developed and developing countries. The initial outlay for a computer is only 10 to 30 percent of the total operating cost over the course of a year. Training, maintenance, and support significantly add to the investment (12). Even if these costs are minimized with the purchase of a basic personal computer — whose acquisition might

involve US$2,000 and require up to US$20,000 per year in support — there are other significant environmental and cultural problems.

Using technology has never been easy especially in developing countries. Developing countries spend just 3 percent of worldwide expenditures on research and development. Consequently, there is a heavy and unsettling reliance on computing solutions for information distribution from abroad (13). These technological answers may be inappropriate and inadequate. In Africa, the United Nations sent 40 personal computers to a technical college which asked only for typewriters for students. A lack of trained instructors made the devices useless. Another African organization found a British university interested in sending it only archaic equipment, so ancient to be nothing more than door stops and paperweights (14).

Computers also generate unexpected problems much like ploughs in Timor. In 1975, the government of Timor tired to interest farmers in using ploughs to prepare rice fields. Farmers were sent to Java to learn the ways of the plough. They returned to find their skills unwanted in their communities and a lack of livestock to pull the ploughs. The few Timorese cattle available were unresponsive to Javanese exhortations to work in the fields (15). It took the government 15 years to correct its mistakes in the use of plough technology. Libraries in developing countries — listening to the siren call of technology from their counterparts in developed countries — have to deal not only with the problems in using a new technology, but also encourage a public less than appreciative of a new commodity of government-derived information (16). What kinds of problems exist, analogous to the Timorese plough?

In China, nearly 300,000 computers are if use, but some 40,000 personal computers collect dust in warehouses thanks to their high cost (some 30,000 yuan or US$10,000 apiece, in a country where the average yearly salary is 1,000 yuan), lack of software, and absence of support (17). Computers are scarce in Chinese libraries, so that bureaucratic paperwork retards public access to collections. Only 570,000 Chinese have the right to use a public library, where an average of only .25 books circulate per person (18). In Trinidad and Tobago, a lack of maintenance and an absence of software and hardware upgrades to existing computers and

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peripherals creates a host of problems (19). In Pakistan, heat and humidity combine with diesel fumes to deposit on the innards of the few existing computers a black film that blocks slots and other components (20). In Sierra Leone, an absence of air conditioning means a mainframe works for 15 minutes and cools off for 30 to protect it, heat-sensitive mechanisms (21).

Socially, computers are viewed in some societies as a threatening force or as a means to escape to distant shores. In Yemen, computers have the potential to produce more accurate enrollment records. Human-invented inflation in manual records costs the government some 300 million Yemen rials (about US$3 million) in expenditures for non-existing students (22). In Morocco, personal computers have been unsuccessful in schools because they are perceived as "intruders" and "superfluous," a challenge to the status quo. In India, 58 percent of graduates in computing and electronics leave the country, making it extremely difficult for the country to achieve its own goals of creating a software industry to generate income and reduce the balance of payments deficient.

In spite of these difficulties, computers have worked well in certain circumstances as information agents. Let's examine one of these success stories to provide us with evidence on how to use technology appropriately to distribute information. In Bali, for 10 centuries, rice crops have been managed by instructions from priests of the Water Goddess, Dewi Danu. Decisions over which fields should be cultivated, which irrigation tunnels should be constructed were all controlled by the priests. Government intervention — ignoring the advice of the priests — failed to significantly increase rice yields nor sway the opinions of farmers. Into this situation came a single computer, to analyze some 173 rice farms. Using the computer's graphic interface, maps were created, displaying all of the farms and their irrigation systems. With the click of a mouse button, these maps could be altered to show the impact of a new farm or a new route for an irrigation tunnel. The priests and farmers were delighted with this new tool — why? The computer collected their knowledge, and in a sense respected it by displaying it graphically in a way that the priests and farmers understood. It allowed them to test ideas without losing land, seed, or labor. Most importantly, it confirmed the importance of their knowledge — accumulated over generations —

and verified it. The maps and models indeed proved the deficiency of the government's plans for dams and large-scale agriculture, reaffirming the utility of Dewi Danu and her priests.

Why was this project so successful? It involved its intended audience directly in the creation of an information resource for the entire community. The end users decided what information was important and what was not important, by inventing a model to suit their needs every day in the fields. The interface was simple, non-threatening, plastic, and unobtrusive, operating on a single compact Apple Macintosh. To its advantage, the project was started in the absence of government personnel and formal financial support. Public agencies, such as the public works department and the irrigation control board, were seen as a threat to a traditional lifestyle. The computer did not deny the value of that tradition, and proved its value in the face of alien engineering.

How can we apply these lessons? Technology as a tool to deliver government-invented information must be also unobtrusive, reliable, inexpensive, easy to use, and highly plastic to its intended audience. Gargantuan solutions are unwieldy and impractical. Small systems with large storage capacity and links to other computers might prove the best long-term solution to truly fulfil a demand for information for the broadest possible audience.

The kinds of technology to meet these demands are available now or will be in the very near future, technologies both accessible and affordable in both developing and developed countries. Optical imaging systems, for example, place thousands of pages of disks, reducing staff time, space, and costs to maintain paper. Provided that training, maintenance, and support are in place, optical systems and CD-ROM, in conjunction with personal computers, may provide an adequate vehicle for the delivery of information. Surveys of CD-ROM technology in developing countries, made by the International Development Research Center in Canada and the Population Information Program at Johns Hopkins University, prove their utility even in the most remote areas (23). CD-ROM technology continues to drop in cost, with CD-ROM drives costing as little as US$300. To create a CD-ROM master — containing some 222,000 pages — requires an investment of US$1,000 to US$2,000. Each disk pressed from the master will cost on an average

of US$2 (24). The success of the Library of Congress' American Memory project — utilizing optical storage for text, photographs, and films — and the Mendocino County Library in California — in creating a CD-ROM that records Native American songs, stories, and images — proves the value of CD-ROMs in handling complex information (25). The "simplicity and economy" of CD-ROMs are equally impressive (26).

Linking even the most basic computers together is important to communicate effectively and in a timely fashion. New technologies, operating without cable or fiber, will provide computer networking even in the most isolated communities. For example Very Small Aperture Terminal Systems (VSATs) are providing computer networking via satellite at rates of up to 9.6 kilobits per second for US$6,000 or less. Further developments will bring the costs of these exotic links down even further (27). Other wireless connectors, using lasers, infrared, and other options, are rapidly being developed to replace unreliable cables that tie computers together (28).

These sorts of connections will allow the unprecedented growth of electronic mail worldwide, born out of an interest fueled by government information and networking, focused on specific, community-driven issues and problems. Tibetans, for example, frustrated by a need to communicate in a most difficult political situation and geographic position, invented TibetNet. With links to 26 countries, Tibetans use computers as a political tool, providing a means to spread news and enhance communications on events within a matter of minutes and hours from one of the most isolated places in the world (29).

The real adaptability of these technologies will come in the acceptance of universally agreed upon standards for computers to communicate with computers worldwide, with the implementation of ISO's X.400 for electronic mail and ANSI's Z39.50 for the exchange of bibliographic records. On the horizon, standards like Unicode will allow all sorts of computers and their users to understand all kinds of languages, including Asian sets with over 30,000 characters (30).

In the end, technology will enable government information to find its way to its intended audience. In this way, technology will be best used as a means to create truly utilitarian resources, that will educate and inspire creativity. By allowing users to take government information and

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invent and manipulate it on their own, they indeed will find unthought-of applications, unforeseen by government bureaucrats. In this way, our societies will truly profit from their initial investments in computers and data, giving intelligence and serendipity full license as never before.

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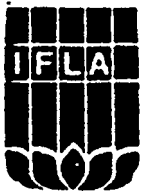
Changing duties;

Relations between Library and Information Work

by

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Changing Duties;

Relations between Library and Information Work.

A.G.A. Staats

Ministry of Welfare, Health and Cultural Affairs,
The Netherlands.

Ladies and Gentlemen,

I was very pleased when I received the invitation to
come here today, to talk about the changes which are
taking place, in practice within the broad field of
what we call information provision. I was pleased in
the first place because I would be able, to spend a
few days in this beautiful country. But, in
addition, there is another reason. Every day, we are
all subject to changes in our surroundings. We
ourselves are a part of it and sometimes contribute
to those changes. This consideration, which is an
honour to me, gives rise to an attempt to obtain
some insight into the status of the work with which
we are occupied: information services based on
literature and other documents. In this regard it
would seem natural to view matters from the
perspective of the developments which can be
expected and, if possible, to indicate what, if any,
are the repercussions for the respective
professional training programs.

I intend to say something about: 1) the organisation in which I work, 2) the management which is concerned with providing information and how this is organised, 3) changes and developments, 4) the conclusions. I hope that you will regard my remarks as being from the point of view of the shopfloor, which is highly influenced by the local situation. I would invite you to think with me and to consider which factors are specifically local and which are universal and not tied to local circumstances.

Ladies and Gentlemen,

The organisation which I am going to tell you about, is the Ministry of Welfare, Health and Cultural Affairs (WHCA). It is one of the thirteen ministries in the Netherlands. It was set up in 1982 and is the result of an amalgamation of tasks which were previously the responsibility of other departments. The ministry is led by Mrs. H. d'Ancona who as Minister has special responsibilities for the portfolios of Welfare and Cultural Affairs. She is assisted by the State Secretary, Mr. H.J. Simons, who also holds political office, and who has been appointed specially to look after the Health portfolio. Both members of the government are assisted by the Permanent Secretary, the top civil

servant, and by four Deputy Secretaries, each of whom is responsible for a broad policy field.

It would be taking matters too far to go into more details now, but you can imagine that the policy field is very varied and extends from the restoration of paintings to caring for a good diet, from taking care of people seeking asylum to the policy on orchestras. To this day there are about 7000 civil servants working throughout the Netherlands within the framework of the ministry. To this day, because procedures have been started are aimed at reducing the number of civil servants. In The Hague and Rijswijk some 2500 civil servants are employed at a central level.

Together they form the nucleus of the ministry. In addition to the Deputy Secretaries there are a number of staff departments, which fulfil a supporting function. By way of example I could name Legislation, Judicial Affairs, Administration and Personnel. One of these central units is formed by the sections, Central Management of Information, Documentation and Library (CMIDL). This staff department operates under the direct remit of the Permanent Secretary. It is divided up and organised according to the type of work. There are about 60 people, who, on a daily basis, are involved to some degree or other with information services. (see

outline)

1. Press and Information Service Department

2. Editorial Department

3. Department for Information Resources

4. Department of Public Relations and General Affairs

5. Department for Cabinet Ministers' Engagements

6. Main Department for Documentation and Library
    - Documentation section
    - Library
    - Literature Study section

The management is in the hands of a director and a deputy director, who are assisted by a secretariat and a financial assistant.

In brief I will now characterise the respective departments.

1. The Press and Information Department consists of a number of policy information officers. They have specialised/acquired information in certain policy fields and support the policy-objectives from the standpoint of information. Furthermore there are project information officers, who are responsible for the campaigns. Take for instance, alcohol limiting campaigns, healthy eating, information on Aids ana so on. 'inere are also 3

media spokesmen, who in the first instance communicate with the press, radio and television, both passively and actively. The newspaper cuttings service is part of this department. In this service, items are selected from the newspapers, documented and distributed by means of collating 2 newspaper cuttings collections each day.

2. The Editorial department is responsible for a number of periodicals which are published by the ministry. The fortnightly magazine "Trefpunt" covers reports from the department. The magazine is sent to the media and the so-called field. The contents consist of news from the ministry concerning new policies and background information on existing policies. The editorial staff is also responsible for internal information and to this end a fortnightly staff newspaper is also produced. In addition they try - when possible; sometimes it isn't - to ensure that written statements from the department are in understandable language.

3. The Department for Information Resources is responsible for the appearance and production of publications which are published . by the department. It advises on design and sees to it

that the house style is used.

4. The Department for Public Relations takes care of the distribution of ministerial publications to the appropriate target groups. Each year there are about 400 publications. Enquiries from those individual citizens who ask the department for information are answered at the information desk or by telephone.

5. The Department for 'Cabinet Ministers' Engagements' looks after the so-called invitation policy. Nearly every public engagement undertaken by the Minster or by the State Secretary has a publicity effect. The department's duties are to ensure that the public appearances have a certain structure and to advise the members of the government in this respect.

6. The Main Department for Documentation and Library collects publications and makes them accessible through an automated system. In addition they provide literature reports.
The library looks after a collection of about 100,000 items and 1500 current journals. They take care of the purchasing and cataloguing of those purchases in the database of the Ministry.
The Documentation section provides abstracts of

books and journals which have been purchased.
These abstracts are entered into the database,
from which the documentation magazine is put
together once every two weeks. Internal
signalling is done by means of the so-called
S(elective) D(issemination) of I(nformation) SDI
service.

The Literature Study section produces literature
reports in response to internal requests. Based
on what has been requested, these reports contain
information on literature research. The report
draws conclusions and makes recommendations (with
regard to policy) on the basis of these
conclusions.

Ladies and Gentlemen,

This summary shows a variety of duties and tasks.
Very different to each other, but with one common
characteristic: they are all concerned with the
transfer of information. In differing tasks we meet
the same elements. I would like to provide you with
an analyse of job descriptions for comparison. It is
concerned with the job of policy information officer
and the job of documentalist. Within the
organisation these positions are reasonably
separated from each other. They are performed in
very different cultural surroundings.

For instance the informations officer operates in
the world of journalism, whilst the documentalist is
concerned with books and libraries. The official
evaluation is not very different. What sorts of
demands are made on these civil servants? I shall
summarise the common features:

- Acquisition, collection of sources
- Selection
- Adaptation
- Distribution

This parallelism can be seen in my opinion in the
editorial staff/journalists. But also between the
public relations spokesmen and the librarians. There
are, however, differences. The question which lies
at the heart of the matter is, are the similarities
stronger, more dominant than the differences? And if
the answer is yes, what are the criteria on which to
make this judgement? Given my own personal
experience and my expectations for the future I am
not entirely certain that my observations can be
called objective.

One noticeable conclusion was drawn from research
carried out by the Dutch Office for Library Staff
and Information Officers (Nederlands Bureau voor
Bibliotheekwezen en Informatieverzorging) into the
connection of the occupational practice in question.

The conclusion was, that if there was a vacancy in the information sector, 70% of the respondents, felt that graduates from outside the field of work should be appointed. In other words, the idea exists that new functions such as information management, should replace the traditionally trained people. This opinion, conclusion - these are not facts - is sufficient in itself to observe that there should be some adjustment made in the training, even if it was only to give such an expectation less credence.

Conclusion

Yet, I have to conclude that - from the point of view of the user - the differences between the various informationfunctions are diminishing. For he or she is primarily interested in the result of the work of the intermediairies. Where the information comes from, or from whom, is only of secundary importance. To put it differently, the user wants to put the question to one person only, to get an answer. Moreover, the user has to be convinced that the information-intermediairy does not limit his search for an answer to the discipline he feels at home in. In future the user will call in the help of an intermediairy - and I'm convinced of this - when he can rely on the fact that the intermediairy knows his way to all kinds of sources that can lead to an

adequate answer. Such sources may be books, newspapers or magazines, but also lobbyists, statistics and databases. As one of the changes one can observe, I mention the shift from information - gathering to information - mediation. More than ever before, the rapid development of information technology brings a growing need for a guide with it. In the near future, that aspect will get the strongest emphasis.

Ladies and Gentlemen, from the comparison between the various job descriptions it is clear that in the future it will no longer be the differences which count, but the similarities. Interchangeability and flexibility of officials will become a prime requirement. The information intermediary shoul dispose of good social skills. The conclusion which I have come to, is that the information intermediary will need to have the following personal characteristics:

- ready to provide service
- friendly
- open
- imaginative
- flexible
- neat and tidy

For knowledge of affairs:

- well acquainted with the content

- technical

- about the environment

I believe that this should be reflected in the curriculum of those institutes providing training in librarianship and documentation.

If you will allow me, I would like to suggest that training institutes should consequently:

1. Focus on communication, both orally and written.

2. Provide insight into information sources, both within society and in organisations.

3. Train people to be all-rounders, no longer limited to specific locations or organisations.

4. Focus on a professional cade and ethic. A qualified person can be relied on to make, as far as possible, an objective presentation of information.

I thank you very much for your kind attention.

POLICY INFORMATION OFFICER

Analyses policy and information requirements.

Prepares (printed) information material.

Ensures contact is made between the media and the Minister or the State Secretary.

Advises on information activities and methods.

DOCUMENTALIST

Analyses and selects literature in the field of policy.

Makes indicative or informative summaries of the content.

Provides information on policy to internal and external users.

Gives advice on literature purchases.

PUBLIC INFORMATION OFFICER

Studies official documents and maintains contacts with the policy sections.

Issues brochures and deals with the correspondence in which information is requested.

Manages the information material; ensures that the information sources and the stores are up to standard.

LIBRARIAN

Acquires literature in specific fields of study.

Introduces lending and distribution procedures.

Provides information on and about the material available.

Division: SPECIAL LIBRARIES

Section/RT: SCIENCE AND TECHNOLOGY 57-SCIE-1-E

Joint Meeting with: LIBRARIES

WORKSHOP THEME (IF APPLICABLE):

Access to scientific and technical information :

the greenlight or not?

by Dan Stoica (Rumania)

For internal use only:

Meeting No: 8.1

SI: (yes/no

Estimated number of participants
in the meeting:

Translation

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Access to scientific and technical information :

the greenlight or not?

by Dan Stoica (Rumania)

Any study of this theme would have to begin by taking a clear position concerning the meaning of the expression "developing countries". This is not my intention : the term "developing countries" can only be transitory and concern a particular view of the world, which is in a perpetual state of transformation. However, by relating this problem to those European countries still referred to as Eastern European countries, I won't distance myself from the theme under study. Being familiar, through reading and personal contacts with the situation in several countries in this part of the world, I know that by addressing the question of "access to scientific and technical information" in Rumania, I can't avoid touching aspects common to the Eastern European countries and, I think, common also to most "developing countries"

The preliminaries having been achieved - or rather dispatched - I can now go to the heart of the problem which is the access to scientific and technical information. From the outset it is necessary to point out that this problem concerns the information produced in advanced countries since both local products as well as those coming from circles of researchers from countries further down the economic ladder have always circulated without restriction. It's a fact one owes to competition, competition, first of all, between the two parts of the world which are organised into socio-political, economic and military blocks. Next, this competition has created a certain sympathy of the non communist developing countries for the communist countries. These latter, in their effort to add to their circle, gladly accepted to join forces. They thus hoped to give themselves more weight in relation to advanced countries. Accepted by both sides, such discrimination has marked among other things, the circulation of scientific information,

However, barriers holding up the circulation of scientific information have always existed. It would perhaps be appropriate to be more clear about our use of the word "barrier", what has already been said, and the kind of barriers which are of interest to us.

In his book *Reflection and information* (Moscow, 1973, p. 191), A. D. Ursul distinguishes several kinds of information barriers : linguistic, geographical, political, historic, in relation to age, psychosocial, professional and those produced by the type of organisation. This isn't the only attempt to classify the kinds of barriers which prevent informational flux but, in most works dedicated to the subject, one repeatedly finds the same ones (i.e. linguistic, geographical, political and psychosocial barriers,) which confirms my choice concerning this classification. Going through the list of these classes

of barriers one realises that some of them would only be taken into account in an in-depth study of the subject. One could therefore only consider the political and psychosocial barriers whatever the nature of one's study. Here, one could still differenciate between internal barriers caused by the failures of a country's social and political system and others, which will be called "external" and which are due to the world political order, to the unequal treatment to which nations are subjected in that which otherwise should be the world "concerto" complete with first and second violins.

As regards internal barriers, after the 1989 spectacular upheaval, they seem to have fallen away and disappeared. Basically originating from the policies directed by the communist system, they were meant to impose the principle by which any discovery coming from beyond the "curtain" always hid something not quite right and, therefore to be treated with scorn or, at least, suspicion. In the 1950s, for example, in the Soviet Union - and in the communist block, by way of sympathy - the first American discoveries in the field of genetics were seen as capitalist speculations drawn up to distract the attention of people from the serious problems which were overburdening the proletarian spirits (a slogan currently employed in communist block countries).

That's all over now. The normal regimes installed just about everywhere in Europe have given room for normal ideas, to principles of collaboration in a climate of total openness from all sides. Clear progress can be seen in an atmosphere of greater acceptance of new ideas, no longer considering them as a factor of social ills but as a source of progress. One is no longer reduced to a vision imposed by communist politicians, a vision subject to an ideology one wanted to see triumph at any price. Scientists can at last impose their vision of progress for they are considered anew as landmarks in the orientation of the development of society. Yet, nobody knows better than scientists the importance of contacts, of openness and of the free circulation of information, in short, of cooperation. Even competition depends on cooperation, however bizzare that may appear (of course it means honest, healthy, competition which is only a comparison of values). Having dealt with the problem of internal barriers, let's take a look at the others, the external ones. But first of all a bit of history:

The globalisation of the circulation of scientific information is no longer a new concept. It dates from the 1960s when UNESCO, in collaboration with the International Council for Scientific Unions, envisaged a global programme of scientific and technical information exchange (UNISIST). In 1976 the General Information Programme was adopted, for the development of UNESCO's activities in the domain of scientific and technical information, documentation, libraries and archives. The UN, in its turn, wrote into the final document of a conference held in Vienna, in 1979, the necessity to create an international informational network in the scientific and technical domain. The network would have to be conceived so that it could respond to the urgent needs of developing countries. It should provide access to scientific and technical information for people and organisations engaged in research thus enabling them to take the most appropriate

decisions for the development of their country. The network would function in such a way that it would allow the establishment of links between the distributors and the users of the information. In such a system, each national focal point would have to be in possession of information about the information (for the country concerned) and it would equally have to benefit from the communication facilities which would allow it to provide and receive information most efficiently.

In their article: "Access to technical report literature in developing countries : the NTIS/USAID international information transfer network" (in The use of information in a changing world; Amsterdam, North Holland, 1984, p. 92-93), J. F. Caponio and J. Frank Post even speak of "regional cooperation". Regional systems of cooperation - for which they have been inspired by a certain Martinez - would have to cover certain necessities. For instance :

- to set up mechanisms for the aquisition and transfer of technical and scientific information at a regional level (common bibliographical services, compendiums of the results of local research, etc.);

- to identify the supply and demand of technical information resources (international services, documentation centers, research institutes, technical libraries, etc.);

- to identify infrastructural deficiencies to which a solution has to be found (all that would come from local agencies and their users);

- to set up an exchange network for research documents;

- to evaluate experiences in the domain of databanks organisation.

As was expected however, the fact that information is becoming one of the most influential factor in the global development of society has started the idea that it was necessary to put together an "international information law" which would function in the context of a post industrial society. The consecration of a legal judiciary for this kind of human cooperation would add the final touches to a framework which would allow the normal, balanced and finally global evolution of humanity.

However, these ambitious projects are still far from reaching their target as block or national interest s slow down the evolution of things.

It often happens that a university in the west refuses to exchange a periodical it publishes in a particular area with one produced by an Eastern European university and covering the same domain on the excuse that it is beyond their sphere of scientific interest, whereas they invite scientists from these Eastern European universities to give lectures and publish their works with them. Collaboration is accepted therefore provided that it is carried out on the more developed territory. I am not going to mention the brain drain from the east to the west by more commercial channels, because that tends finally to become rather the problem of developed countries, which are overburdened by large waves of immigrants. I simply wish to say that, with minimum effort and strategic reasoning, everything could be arranged in a balanced and endurable manner.

Reviews of proceedings, important to libraries, completely covering one or several associated domains, can only be purchased by institutions or other scientific documentation centres with a solid budget, that means the developed countries. As these proceedings are the contribution of scientists throughout the world, Eastern European scientists are also invited to join in and their work is very much appreciated. It would suffice, therefore, to support one of these proceedings periodicals in an eastern European country, - in Rumania, for example - a solid library of whatever particular speciality would take shape and develop there where the need for high level scientific and technical information is as sharp as in the west but where its access is dramatically difficult. UNESCO could try and persuade governments in developing countries to invest in such an enterprise.

Programmes could be envisaged concerning the improvement of library buildings which have had to endure harsh treatment for nearly half a century. Buildngs which were landmarks of European architecture from different epochs have been modified in their structure, overstocked and badly maintained. The misfortune which has struck the University Library of Bucharest has been perceived as a stroke of luck by some envious ones, because its reconstruction will increase the building size and "they" will thus benefit from enough space for their books and activities. Misfortune has already struck all the libraries in this part of Europe. After having s. :n the Lenin Library in Moscow I understand that it isn't only fire which destroys grandiose edifices of the past . At Iasi, for example, the M. Eminescu Central University Library will end up collapsing under the weight of its own treasures. The danger is of more pressing concern since the institution has been given the name (and obligations) of a regional national library. This role is proof of the quality of the library staff and the work carried out. At the same time it presupposes the enlargement of the sphere of tasks that the library would have to accomplish for the community. To serve the ever growing needs of a public ever more numerous living on an already very extensive territory, such are the working conditions one aims to achieve in Rumanian libraries. More space (and well organised space) means storerooms, offices, rooms for the catalogues and others for the general public adapted for their particular use. Finally, it is the idea of access to information which is served and it is to this end that the problem of library buildings must be resolved.

As a lot of library buildings are part of the national heritage, even the world heritage, UNESCO should be able to collaborate in safeguarding these monuments. It isn't only a question of repair work to be carried out but also the construction of building annexes - structured and equipped in the most up to date fashion - which could relieve old buildings of the surplus of documents and activities. One would thus create equal partners from all points of view for libraries and documentation centres of advanced countries with the idea of full use of all kinds of documents dispersed almost everywhere in the world at the service of everyone.

One idea which may appear too bold - because it actually is -would be to try to include in an international legal system concerning libraries and the circulation of information, the rule of a "regional legal deposit" aiming at the accumulation of information on a domain in a particular pilot library. This would have to cover tasks concerning the treatment of documents, making them known as well as circulating them. The strict specialisation of certain libraries throughout the world - above all scientific and technical libraries - would jeopardize their very existence unless they didn't grow, diversify and modernise the sphere of services that they offer the general public.

Already several centuries have proved that the ordinance of Montpellier - that which the contemporaries of king François I had to accept as a royal fantasy - functions for the benefit of universal cuture; why shouldn't such a "fantasy" coming from IFLA and UNESCO not work at this century's and millenium's end?

Finally, scientific and technical libraries of countries like Rumania would be able to participate in international progammes on documents and information processing and offer, through specialists and collaborators in their scientific communities, cataloguing and classification services that publishing houses would appreciate. Of course the processed copy would be kept by the library in compensation for its services.

When one mentions information access one doesn't only mean acquiring documents and making them available to the public. It is also necessary to speak here of interlibrary loan, not only loans within the country which function satisfactorily because surveyed and directed by an institution of the national network, but also international loans which are a problem. The problems of international loans are linked with those associated with postal and telecommunications services, customs services and other services, the nature of which one has difficulty in ascertaining. The links between libraries are weakened by the functioning of other institutions. There are also internal services which, I hope, are in the process of disappearing, for they are related to the general economic situation. Rumanian libraries, for example, have always been very receptive to appeals made from elsewhere. However, in the case of documents, the circulation of which is controlled by the national heritage laws, one tries to send a photocopy. But there again there is a problem : to make photocopies you need a photocopying machine, paper and ink.

The problems of others seem to be linked exclusively to external factors (the postal or transportation system). Documents sent by sea from the United States to Rumania may spend 4 to 5 months before reaching their destination, which makes it impossible to reply within 30 days, the accepted limit worldwide. This kind of problem seems to me to be most difficult to resolve. It is assumed, even in an age of automatic delivery of documents, that a certain number of books, of a particular category, would always have to be the object of an international loan "in the traditional way", which would mean continuing collaboration with the transport and postal services. This is where I think UNESCO should intervene, in areas which are likely to contribute to the

normal circulation of information for the sciences. Couldn't the International Postal Union be made more aware of this question and control the cost of sending scientific information?

Before concluding it would be appropriate to point out the relatively priviledged situation of scientific and technical libraries in Rumania (and similar countries) in relation to encyclopaedic university libraries, libraries in the humanities, social and economic sciences and public libraries. Even during the dark period of the communist regime, these kinds of libraries have constantly progressed - by short steps, it is true - because the neutral nature of the domains they cover couldn't pose problems with regard to the politics of the moment. Also, without outside assistance, they have been left to their fate, which already wasn't a bad thing. Built up around famous research centres, these libraries have been able to keep their collections up to date mainly through systems of exchange. Nevertheless there was always something missing, above all the possibility to invest in order to improve the functioning and administration of theses libraries. The norms set out by IFLA have always been closely observed but everything has been carried out "in the traditional way" due to lack of means.

By way of a conclusion, I return to the idea that it's necessary to see the problems of libraries in developing countries - like Rumania and other eastern European countries - as problems which concern the future of the worldwide circulation of information. These are pratical problems and not problems arising from the prehistoric visions and ageing mentalities of the professionals from this part of the world. I have presented here the problems which I hold to be the most serious and have attempted to sketch possible solutions. These solutions could represent a common effort for all those who dream of an ideal system for the circulation of information.
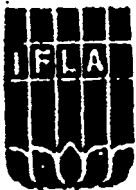
INITIATIVES TO FACILITATE ACCESS TO S&T INFORMATION IN INDIA

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Abstract

Creation of a modern information market in India would require a shift from conventional value systems and traditional practices. In the new scenario, India's role should not be limited to consumption alone, she should grow as an active contributor of products and services to the international market. Indian industry should be encouraged to undertake activities of database development on national and nationally generated information, value-added products and supplemental inputs to the international ventures. At the same time, it should facilitate Indian users to access international sources of information and foreign users the Indian sources of information.

The market would not be able to organise itself unless a commercial approach is adopted in all the activities of products-services development, distribution, pricing and promotion. It is also necessary to take cognisance of the fact that in a mature market, STI has to co-exist with business and financial information. Above all, the dominant role of the government as the promoter and financier of information activities ought to decline. Commercial and private enterprises and non-profit organisations may be encouraged to take on more responsibilities.

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INTRODUCTION

The imperative to enhance farm productivity to feed the

growing millions, the necessity to build an industrial base

with up to date technology and the desirability of promoting

the services sector to bring about an improvement in the

life-style of the population, make it essential for India to

be a constant participant in the activities on new and the

emerging areas of science and technology (S & T). The

need to strengthen information services is therefore not a

matter of debate, how it should be done is more important.

Most consumers in a developing country like India are

generally accustomed to a poor level of services; information service is no exception. The consumers do not know what to ask for; nor they realize that the services could be or ought to be better. An information user takes a lot of pains to collect information and perhaps he expects that any body in need of that information should undergo similar troubles and therefore, he does not share information with others. The drudgery involved in the collection process further dampens the initiatives to use information. Such characteristics invariably lead to the dormancy of demand.

On the other hand, Information managers are equally constrained and lack exposure to the variety of modern alternatives and adequate infrastructural facilities. They also need to manage their services with frozen financial inputs. Further, their activities in an institution are viewed as a purely supporting function. However, skills are not lacking and given proper facilities and environment it would not be difficult for them to adopt modern information concepts, tools and techniques.

SCIENCE & TECHNOLOGY SCENARIO

The total R & D expenditure in India, now stands at about one percent of the Gross National Product. In absolute terms, it was Rs.34.72 billion in 1988-89 in which the share of private industry was Rs. 3.64 billion. As much as 67 % of the total amount was spent on applied research and experimental development. It is also interesting to note that 80% of the investments went towards non-defense research

which by and large generated information in public domain.

India is well-endowed with a huge stock of S&T manpower. The estimate was 3.4 million in 1990; out of them 81 % were economically active. However, only 268 thousand were engaged in research and development and related S & T areas. Enrolment of students in the institutions of higher education is equally astounding. As many as 3.8 million were in 164 universities and 6,597 colleges in 1987-1988; 29.5 % of them were in S&T faculties. It is also worthwhile to note that there were as many as 242 thousand teaching staff in higher education sector.

The purpose of quoting these gross estimates is to provide an understanding of the order of magnitude of the size and potential STI market and user population.

STI MARKET

The magnitude of investments in S&T would support the contention that the market is likely to sustain a sizable volume of STI transactions. Precise information is not available on STI investments. A quick estimates puts it at US $ 185 million excluding overhead costs. This is perhaps an underestimate.

Indian Institutions have been subscribing heavily to printed copies of databases. Recently several service facilities were created to provide STI and custom search services in batch mode using databases on magnetic tapes and CD-ROM. Facilities for accessing international online datahosts are now available though by and large concentrated

in a few metropolitan cities. So far, no datahost for public access has been established.

India has made considerable progress in the recent past in the field of computer communication and networking. Implementation of the PSDN is however, considerably delayed. Several data networks using satellite and microwave communication and ordinary landlines have come to existence and many more are being planned. Besides, an international gateway has also been established.

Two essential ingredients to sustain a viable market already exist viz. a sizable population of consumers and the user capacity to pay for services. However, the situation is rather weak in respect of the development of products and services and their distribution system.

The principal concern is to increase the market share of modern information products and services in relation to the traditional ones. Presently, this share is very small. That is why perhaps, ESA - IRS did not pursue the early lead it had gained during the 80's; Maxwell Communications did not bother even to enter the Indian market or DIALOG maintains a low-level of presence. In contrast, all the database publishers have a good business of hard copies; peculiarly, they are not aggressive in marketing their CD-ROM products.

PROMOTIONAL & EXECUTIVE INSTITUTIONS

Role of Government

Private investment is an index to a real demand, while

public expenditure is aimed at social well-being. With stable interests like profitability, expansion and diversification, private investments tend to be efficient. With changing social goals, public interest may also result in varied success.

Government efforts or public funding would be welcome to develop the market, but it must be realized that there is a limit up to which it can go. Perhaps, public investment on information (at constant prices) will never be more than that in the last decade. The following courses of action may be explored:

- All information products and services whether generated through public funding or otherwise may be priced to offset the costs in part or full.

- All information centers may optimize their resources or infrastructural build-up individually and collectively.

- Actions may be taken to attract private investments on information industry. Book publishing excluded, such investments so far have been of low order. The most essential measures in this direction would include:

    Recognition of information as an *industry*

    Provision of liberalized credit to entrepreneurs by banks

    Provision of venture/risk capital to entrepreneurs by financial institutions

    Granting of liberal tax benefits in the initial years of operation

- The private enterprises may also be allowed to use information resources and infrastructure of government and government supported institutions on reasonable terms.

- The responsibility of dissemination of government information may also be given to the private enterprises. In this context the initiatives taken by the Department of Trade and Industries, U.K on tradeable government information might be recalled.

Role of Non-Profit Organizations

Internationally, non-profit organizations run some of the most successful database ventures e.g. CAS and INSPEC. In India, though non-profit organizations are involved, the growth of the industry has been dismal. This may be attributed to the composition of the sector itself -- here the organizations are largely government owned or supported. Such organizations are generally concerned more with meeting the social welfare objectives and not taking a path of self-sustenance. They neither compete among themselves nor face competition from outside. On the contrary, they give unfair competition to the private enterprises from a favorable financial platform and preferential tax benefits. Further these operate in a situation where the demand exceeds the supply. As a result, the services do not improve in response to the needs of users.

Role of Profit Organizations

The low share of private sector to research and development (about 10 % of total investment) indirectly indicates the magnitude of their STI infrastructure. In fact, apart from a few centers, most of them draw heavily from public libraries and information centers.

In India, apart from the book publishers and sellers, information companies do not exist. Though information brokers could have a field day by maintaining a line of supply between potentially information hungry customers and passive sources of supply, as yet there has not been many success stories. Few market research and management consultancy organizations offer database services, but only relating to

consumer products.

If India is to come out of the library based information
culture and adopt modern information products and services
the concept of *marketing* would have to be adopted. The
concept includes a wide range of activities such as the
understanding of user needs, design of products and servi-
ces, design of pricing, distribution and promotion systems,
all finally geared towards satisfying the users needs. For
this, required elements of awareness and motivation are to
be generated among key players in the market : Consumers,
product developers, distributors and also investors.

The Task

Given the background, the responsibilities of the Indian
Information Industry would be :

- to facilitate Indian STI user community access to
  the global knowledge base.

- to specifically collect, collate and disseminate to
  national and international community of users, the
  S & T information generated in India and published
  in Indian literature, and

- to gain access to the more significant part of the
  Indian contribution to the world of knowledge
  recorded in non-Indian publications.

To accomplish the tasks, government, private non-profit and
profit organizations will continue to play their res-
pective roles. However, the desirable scenario would be the
one in which the present dominant role of government in STI
declines progressively in relation to the other two sectors.
This may impose some financial burden on the users com-
munity no doubt, but they would be assured of the
continuity of supplies. Moreover, the users are expected

to take on some responsibilities themselves and just not keep looking at the government institutions for non-fee based supplies.

The process of change in work culture, attitude, practices and the like would invariably be slow. Certain policy instruments are required to expedite the change and direct it towards the specific goal.

STRATEGIES FOR STI MARKET DEVELOPMENT
Accessing the Knowledge Base

Universality of science implies that information support required in pursuit of science both in the developed and developing countries is similar. The fact that scientists in developing countries do not get this much needed support gets finally reflected in their output. Of course, there are other factors.

In order to bring up the information support services to scientists and technologists at par with those available to their counterparts in the developed countries, India should set up facilities and capabilities to access the entire spectrum of knowledge (at least, all that is available in public domain). In this context, the strategy should be limited only to gaining easy access. To have all the information in store is an unrealistic proposition, though strangely enough many pursue such a goal at a much isolated level. For an economically poor country like India, even the access may have to be arranged on a collective basis. This may mean a sacrifice in efficiency, but it could be potentially more cost-effective.

Technologies for Access

A wide range of technological options is available the specific mode and modalities for access may be chosen given the national infrastructural framework and socio-economic conditions. Though one may like to have the most upto date technology, the environmental conditions in a developing country might be a damper to their adoption and absorption.

Further, information industry depends significantly on parallel development of other sectors especially the telecommunications. As in other developing countries, different sub-sectors within the telecom sector compete for a share of the limited budget. In such situations, it is obvious why rural communications should get a dis-proportionately high share vis-a-vis digital data networks (considered as esoteric or elitist requirement). However, it is not easy to influence the plan priorities. While one may aspire to have a digital data network, one has to learn to live with such prevailing conditions and try to make the best out of what is available. The philosophy advanced here is that information industry may continue lobbying for a fully blown PDN and links with the national and international data carriers but it should not wait endlessly for such an infrastructure to be in place or make this a precondition for action.

For a resource scarce economy of India, the waiting time could be long. Techno-economic alternatives are now available for useful application during the interim period. Nevertheless, due care should be taken to select a hardware-

software system that would allow easy transition from one technology level to the other with minimal modification or replacement.

The state of computer communication facility is due to the country's poor capacity-to-invest (and also a general lack of management). It is in no-way a reflection on the technical work force. The strength of skills available may be utilized for innovating interim solutions to partially cover the gaps in infrastructure.

Safegaurding Access

It has been mentioned earlier that self-reliance in information is not achievable even at the collective level. Indian S & T therefore would become more and more dependent upon the flow of information from exogenous sources. And this is unavoidable. An obvious corollary would be :

- How real is the possibility that the information tap may go dry?

- What could be the impact of such an event?

Though not directly related to the field of information, India has already been facing problems in acquiring certain items of high-technology. Restrictions have been imposed on the *alibi* that the product/technology might be transferred to a third country, or it could be used for the purposes other than stated. Therefore, the eventuality of a squeeze (deliberate obstruction to the flow of information) can not be ruled out but the matter may not be all that serious in real terms.

Even if a squeeze takes place for some geo-political reasons, it may not last for long. Two major forces viz.

scientific spirit and commercial motive are expected to defuse the crisis soon. Scientists in all democratic societies are free to communicate so long as that does not go against national interests. Therefore, the *invisible college* will continue to operate; the professional bodies may also exert pressure to neutralize the problem. Since the information business is largely in private sector, the lobbying to safeguard commercial interests is likely to be strong.

A more plausible situation is the breakdown in certain commercial arrangements. A case already exists in which the National Centre for Science Information (NCSI), Bangalore had to discontinue its SDI services based on Chemical Abstracts database because of stringent conditions of payment to CAS. These conditions were not relaxed in appreciation of certain genuine difficulties, and even on the consideration that India buys more than 100 hardcopies of the database at a fabulous cost.

The more interesting cases are those in which the country's own rules and regulations cannot be negotiated. For example, the NTIS database on CD-ROM ordered by the National Aeronautical Laboratory, Bangalore could not be cleared through the customs. The arrangement of Indian Embassies sending (*smuggling* may be more apt an expression) datatapes through diplomatic bag to Indian destinations to avoid delays in consignment clearing is another instance. However, if the case is properly argued, Government can always rationalize such rules.

Whatever way the flow might get impeded, the information

industry should be prepared with the alternative means of tapping information. For instance, the CAS case cited could be handled in following ways:

- The NCSI could use SDI facilities available with Online vendors like ESA-IRS or DIALOG at off-peak hours.

- Or the centre could use the STN and avail of the huge university discounts available.

- Or it may explore the feasibility of using alternative databases like PASCAL.

Contribution to Knowledge Base

Long-range sustenance might become a problem if the Indian Industry were acting only as a conduit for flow from exogenous sources. A healthy industry should be able to stimulate and nurture a two-way flow.

Improvement in Primary Publications

Much of the significant output of Indian S&T activities gets published in journals of foreign origin mainly for two reasons -- that foreign publications give more visibility to the work and secondly, Indian periodicals are poor in quality and their timeliness.

Improvement in primary publications alone could result in a long chain of benefits:

- Apart from that Indian materials could be found from sources within India because Indian writers would be more inclined to contribute to Indian literature it would potentially attract foreign authors also to write in Indian journals. As a result, Indian information itself will become a quantity to deal with.

- More Indian publications will then be included by the indexing and abstracting journals (for example, presently the Science Citation Index covers only 18 periodicals of Indian origin).

- Indian publications would become a good instru-
ment of exchange for primary as well as secondary
publications.

- Indigenous databases on Indian publications would
be more respectable. And foreign hosts may
also find these commercially attractive. Further
establishment of Indian hosts for generation
of national and international database services
should also be viable.

- Established database producers would get more
interested to work out tie-up or co-production
arrangements.

Generation of Databases

Initiatives on following lines may be worthwhile :

- India could create databases in her areas of
strength.

- India could adopt areas of database generation
for which an indepth treatment is lacking in
global databases.

- India could undertake activities of value addi-
tion.

- India could produce valued added products in
which the addition of Indian information might
be of significant interest.

- Besides, it is obligatory for a country to col-
lect, collate and to generate services on
certain national information or information
of national interest.

Product Development and Delivery

The Indian database producers are likely to come across
serious marketing problems abroad and also within the
country. The Indian users may depend more upon their
personal contacts and their personal knowledge, than refer
to a database for Indian information. Whereas, a foreign
user may look at Indian databases as too small a segment of
knowledge to warrant specific attention.

However, both sets of users may welcome any Indian infor-

mation that comes along with others through a single search. Such facility would demand that the Indian database segment be merged with a relevant global database. Such arrangements are beneficial to both Indian as well as the international database producers.

Benefits to International Database Generators :

*   Decentralization of input preparation reduces the lead time between primary publications and production of indexing and abstracting materials.

*   It helps in overcoming the local language barriers and also in understanding the concepts which may be local in nature .

*   It obviates the need to build up primary collections and required infrastructure for abstracting, indexing and computer handling at the

    central processing unit.

*   It promotes better dissemination of information at the local level.

Benefits to Indian Input Suppliers :

*   The involvement in international ventures helps in standardizing the data compilation efforts at the local level.

*   Such collaborations may also involve transfer of software for input preparation, local processing etc.

*   Acquisition of international compilation in lieu of inputs implies savings of cash expenditure more often in terms of hard currency.

*   Association with international activities may eventually lead to development of comprehensive information system at the local level.

It is likely that in future many database producers, both commercial and non-commercial, may opt for decentralized input arrangement which could work on the basis of payments in kind or may involve cash payments on commercial terms. Similarly a large database like PASCAL may also welcome bilateral collaborations. All such arrangements are however

to be worked out on one-to-one basis.

Resource Management

The following three principles are important   in the Indian context:

- Reduction of avoidable overlaps in input

- Increase in coverage even at constant input level

- Reduction in use of foreign exchange

It need not be mentioned that these three are inter-related. Rationalization is also one subject which needs very careful piloting as a government move could be mis-taken for bureaucratic interference.

The major STI operators often find it difficult to take a realistic view of.the demand. Since high sensitivity and impatience characterize the user community, a lot of redun-dancy is usually built into the system to take care of exigencies. The problems are acute at the institutional level where the information manager tries to satisfy the clientele with a budget that is steadily eroding in   real terms.   He may reduce the extent of redundancy provided he could be reassured of supplies at the time of his needs. Such guaranties cannot be given to an isolated institution. A mutual assurance scheme is called an *information hinterland* delineated carefully on logistics considerations. Overlaps can be reduced through voluntary adjustments.

Since   the measures in the form of directives may   not work, government could play a disguised role and try   to create conditions conducive to collective decision-making. To start with, a forum that facilitates exchange of notes

among decision-makers may be established. The extreme scenario to work towards would be the pooling of a common fund for making investments.

The practice of hardcopy acquisitions may be too historically entrenched to break away from. However, information centers and services should coordinate their actions while dealing with other forms of database delivery such as online and stand-alone products on CD-ROM. Multiple imports may be discouraged to the extent possible. Further, in every decision, the trade off between acquiring one *vis-a-vis* the cost of accessing the same through alternative means, may be analyzed. For example, databases in low demand may be accessed online; whereas, oft-used databases could be procured in stand-alone mode, and installed on a host to generate cheaper local online services.

Similarly, when SDI profiles are small in number, the SDI operators could use online facilities (that too availing of concessional rates at off-peak hours).

Aligning with the World

Online services started in North America and Europe through bibliographic databases primarily relevant to the S & T area. Under the UNISIST programme, Unesco had taken major initiatives to introduce the technology in developing countries. In accordance with its charter, the subject coverage was also S & T and Social Sciences.

After an experimental phase, the Online Services provision were quick to adopt other forms of databases as the

S & T bibliographic databases lost the market share rapid-
ly. In North America, the STI had only 2.4 per cent
market share in 1988, which may decline further. Many
factors are responsible for this. Investment on a subject
like S & T and activity like R & D do not usually show
immediate visible returns and therefore, are easy tar-
gets in the event of a budget squeeze.

The question is whether a similar scenario is possible for
India. So far, there has not been any movement in the
market to allow an inference either way. However, consi-
dering that the Indian market is not an isolated entity
but part of a world market, and recognizing that it is too
small a part to influence the global scene, the plausible
conjecture would be that the Indian situation will
eventually align with the world trend. The obvious
corollaries to be answered are:

- Whether measures should be taken to expedite the
  change;

- Who should take the responsibility to promote
  the change ? What role government should play ?

Generation of Internal Strength of STI Market

One has to recognize that the S & T information market lacks
an intrinsic financial strength. In a country like India,
the consumption is mostly paid for through public funds.
And the flow of funds largely depends upon policies
formulated by governments. To illustrate the point, in
India, in the later part of 70's, the emphasis on
high technology shifted to S & T for rural development.
The policy reverted to high technology in the 80's until
1990 when the focus once again changed to rural and

backward area development, development of weaker sections and the like. These policy shifts usually have impact on budgetary provisions. Further, even within S & T information sector, a balance was not maintained. In other words, long-term dependence on public funds would not be in the best interests of the STI market. And it is time that STI market generates its own strength. For this, there are two alternatives:

- The STI market remains a passive observer of the international market trend, or

- Taking due note of the international trend, STI operators lend their expertise and take initiatives to develop other components of the market.

It is felt that the former alternative would be short-sighted and suicidal. A stunted growth of business and financial information sector would not be in the long term interest of the market of which STI is also a part. Whereas, adoption of the second alternative would ensure a pivotal role for STI operators in the information market place for years to come.

In other words, this would mean that the conventional STI programmes should extend their activities to business and financial information areas as well, by promoting the generation of a whole set of databases and services which the business people also require. The ultimate aim should be to evolve a mechanism whereby revenue surpluses of the business and financial information sector could partially support the STI activities [This might be an idealist's way of viewing a really difficult situation].

Self-Sustenance

The other pertinent issue to be considered is whether an infor-mation market in a developing economy could be self-sustaining. It is safe to assume that it would not. Some of the activities taken up in the private sector may earn an independent existence, others would require incubation for a long time.

The international experience is no different. Those which start as a private enterprise, perform better e.g. DIALOG and ISI. Some do well on a collective basis e.g. Maxwell Communications. In yet another case, collateral activities compensate for the poor earning capacity of information services; for example, WEFA's 75 % turnover comes from lucrative economic consultancy and information consolidation activities.

In contrast, government subsidies continue to prop up the national host services in West Europe. For example, according to BMFT data (Ministry of Research and Technology of FRG) government subsidies to West German hosts like FIZ Teknik and DIMDI is higher than 50 per cent of expenditure. In fact, the high level of subsidy might be responsible for the delay in attainment of maturity by national information markets in Western Europe.

The situation in India will largely depend upon the success in enticing private enterprises in the information market; more it is the better. For that matter, government funds will be better spent in infrastructural development and provision of credit to private enterprises. In any

case, the promoters and financiers would need to keep their interest alive for about a decade to observe any perceptible change in the scenario.

SUMMARY

Building up of a modern information market would require active participation of information users, individuals and institutions responsible for product development, distribution and investment. The existing library-based information services would have to go.

The market should facilitate the Indian users to access the world of knowledge and the foreign users to access Indian information. A goal of self-reliance in information should not be pursued. It is necessary to keep abreast of the new developments in the international information market and identify alternative sources for accessing similar sets of information for fall back support.

To generate an intrinsic strength of the market, India should organize indigenous primary and secondary information for national and international consumption. A lot could be achieved simply by improving the quality and timeliness of primary publications. India may also selectively create databases in the areas of her S & T strengths besides exploring the possibilities of value added products. Further, Indian institutions should arrange tie-ups with global database producers for Indian or partial database input support.

Keeping in view the economic conditions in the country,

utmost effort is required to be made to optimize investments *vis-a-vis* information resources development especially when foreign ex-change is involved. Though desirable, it is not essential always to have *state-of-art* technology to maintain the market. In an investment-scarce situation of India, one has to innovate appropriate solutions with whatever infrastructure that is readily available.

The scientific and technological information alone is not sufficient to sustain a healthy electronic information market. In keeping with the global scene, other components of the market should also grow simultaneously, and the sooner it does, the better. As the early starters, professionals and institutions involved in developing and managing the STI should take initiatives to effect this change. A mechanism may be evolved to reinvest the surplus of the business and financial information sector for furtherence of the STI.

The proportion of government investments on information activities should decrease. The non-profit organizations and private enterprises should take on increased responsibilities. Even where government investment is involved, the activities should be such designed as to be self-sustaining in the long run.

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Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

IMPROVING ACCESS TO SCIENTIFIC LITERATURE

IN DEVELOPING COUNTRIES -

A UNESCO PROGRAMME REVIEW

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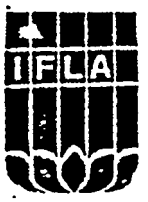
Abstract
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Section/RT:

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

This Programme considers the need to improve availability of scientific publications as one aspect of the overall problem of transfer and accedd of scientific information in the developing countries. The key technical aspects involved in ensuring availability of scientific publications to potential users consist mainly of :

- defining "core lists" of journals
- library networking and resource sharing
- new approaches based on information technology with particular emphasis on CD-ROM.

The high cost and difficulties of trying to meet, at the international level, the needs for scientific literature of developing countries are presented and arguments are provided for continuing UNESCO's emphasis on helping institutions in developing countries to help hemselves. The proposed approach stresses the creation and strengthening of national, regional and international co-operation networks for document delivery, including exchange and onation of publications, taking full account of existing international library and information programmes and ressources and working closely with concerned NGOs. The potential of CD-ROM in helping libraries in developing countries provide quick access to substantial portion of the scientific literature is particularly underlined.

please include in the paper!

IMPROVING ACCESS TO SCIENTIFIC LITERATURE IN DEVELOPING COUNTRIES

A UNESCO PROGRAMME REVIEW

Scientists in developing countries have a special need for documentation and information services because (i) they generally benefit less than their colleagues in developed countries from scientific colloquia, "invisible colleges" and other important alternative means of access to information and (ii) they must make more prudent use of limited scientific facilities and manpower by not repeating experiments which have already been conducted elsewhere.

Despite having greater needs, however, scientists in developing countries have less easy access to the scientific information than their colleagues in developed countries because (i) the local library and information systems are generally poorly developed and (ii) international pub
lications and information services are relatively more costly in developing countries both in absolute terms due to mailing and handling costs and in relation to the local budgets for scientific research.

As a result, the gap in access to information between users in developing countries and the rest of the world increases each year.

Libraries in many developing countries rarely have enough money to subscribe to journals or to buy books, they remain libraries in name only and are unable to perform their vital role - that of providing ready access to critical information and knowledge. This serious shortcoming has another less obvious, but, unfortunately, even greater negative result. Because users know their libraries will not be of much value, they do not even try to find information that might be useful. Resignation among users of lack of help from libraries further undermines the services libraries might be able to provide.

As a result of this situation, scientists and scientific institutions in developing countries are understandably concerned, and recent years have seen an increasing number of pleas and proposals made to ensure equitable access to scientific information. UNESCO has been working for many years in this area and is uniquely equipped to make an even greater contribution in the future, thanks to its mandate, accumulated experience and on-going programmes in the areas of science and technology, higher education, book promotion and copyright and library and information science.

Access to literature as one aspect of a larger problem

Basic science is by nature international, and scientific results published in the 'traditional' international literature form the foundation for scientific advance. Many other types of information are also needed, however, particularly for applied research relevant to the problems of developing countries. One can cite in this context the patent literature which often announces discoveries which are only later, or never, published in scientific communications, and the so-called 'grey literature' of research reports which are not published at all in the formal sense. The research results of the developing countries often form part of this grey, or uneasily identifiable, literature, in that they may be published in reports and journals which are not systematically abstracted or disseminated. One must also consider the need for information which may never be published, but which can be identified in scientific gatherings, in informal communications, and through specialized databases describing research in progress, products and processes, sources of expertise, etc.

'Value-added' information services, such as critical analyses tailored to the needs of specific users, as much as and perhaps more so than simple access to published works, are particularly important for scientists in developing countries if they are to take advantage of all available information and knowledge in solving developmental problems.

It is clear in this context that the access of libraries in developing countries to books and journals is only one link - although a very important one - in the overall information transfer chain. These materials can only be utilized effectively if the library and information infrastructure is able to manage and disseminate them, and to process and analyse them according to user needs.

All efforts to improve the access of developing countries to scientific literature, even if based on the ideal of equal access, must, of course, pay special attention to economic realities, and particularly to the cost and effectiveness of the various options for programme action. In practice, any solution will of necessity be imperfect and will have to be clearly defined in terms of national and international budgets, users to be reached and services to be rendered.

User needs - the 'core' literature

The concept of a core list of journals or journal articles - i.e. a grading of items in terms of the priority and

ensure that the list contained titles of interest to
scientists in developing countries, including 393 journals
published in those countries.

From the above discussion it can be seen that, out of about
50,000 scholarly scientific journals, several thousand can
be considered 'core journals', including at least several
hundred in each major discipline area. Other journals can be
considered as being of medium importance and still others as
fringe journals in a given discipline (although these same
publications may be core journals in another discipline).

Library networking and resource sharing as the basis
for document delivery

Scientists should have ready access to the core journals in
their discipline, if not in their own institution at least
in a major library in their city or country. This is only
possible through interlending and other co-operative
arrangements.

It is clear that international assistance in document
delivery can only be effective if appropriate local document
delivery mechanisms are established. The steps to be
undertaken in this context include:

- agreement on objectives among the co-operating
  libraries and information centres, within the framework
  of a national information policy or other basis for
  common interest;

- definition of the target users and their literature
  needs;

- division of responsibility among the co-operating
  centres for acquisition and provision of the core
  literature; compilation of a union catalogue
  identifying their holdings and establishing a system of
  inter-library loans and reprographic services to
  satisfy user requests for this literature;

- arrangements with external document delivery services
  to provide literature not included in the core
  holdings.

Review of UNESCO's efforts

UNESCO activities to promote library and information
services, notably within the framework of UNISIST and the
General Information Programme, have always included a strong
effort to improve the access of scientists and engineers to

information and documentation. Efforts in this area have included:

- advice on national information policies and the development of national library and information systems;

- development and promotion of standards and methods for the transfer of information, such as CDS/ISIS and the Common Communication Format;

- support for the development of scientific libraries and information centres, and of regional and international scientific information networks;

- promotion of the training of information specialists and of users of scientific and technological information.

One specific UNESCO effort designed to improve access to publications has been the work undertaken with the scientific community on the preparation of the core lists of journals described above.

The overall objective of access to publications has been advanced through the UAP Programme, which was initiated, jointly by IFLA and UNESCO, in 1982. Under this programme, guidelines have been published and a number of training seminars and pilot projects undertaken. Among the guidelines one should cite the "Model Handbook for Interlending and Copying" (PGI-89/WS/2), "Measuring the Performance of Document Supply Systems" (PGI-87,WS/21) and "Training modules for interlibrary lending and document supply (PGI-91/WS/7). The most extensive pilot project, through which more than $ 100,000 has been provided for training, equipment, advisory services and financial support, has been undertaken in Senegal with a consortium of three cooperating institutions – the Library of the University of Dakar, the National Archives and the Institut fondamental d'Afrique noire (IFAN); a number of subscriptions to international scientific journals have been defrayed within the overall project designed to provide better access of library users to national and foreign publications.

International provision of entire scientific journals

This is a major problem, but one about which UNESCO has to exercise particular caution because:

- The needs for journals and the costs in satisfying them are very high, and UNESCO's contribution could thus only be a small one. The minimum number of journals required in each country in each broad scientific

frequency of the users' need for them - offers in theory an attractive approach. It has been known for many years that a very small number of journals or articles account for a very large number of user requests (for example, according to the empirical Bradford's Law, if 1000 journals will satisfy all user requests in a given field, about ten journals will satisfy one third and about one hundred will satisfy two thirds). These core journals should naturally be accorded priority in deciding on library acquisitions and on the organization of information services; the satisfaction of the rarer requests for other information sources should, of course, also be ensured, but for practical organizational and economic reasons they will take longer and be more expensive to satisfy.

A major problem with the above strategy is that there is no clear, unique method by which a core list can be defined. Within any given scientific discipline, there are three basic methods which can be used (singly or in combination) for this purpose; peer evaluation, citation analysis and coverage by major international indexing and abstracting services.

In 1979 UNESCO, within its General Information Programme, sponsored the preparation of core lists of journals in the life sciences (document PGI/79/WS/12) and engineering (PGI/79/WS/13) by the Abstracting Board of the International Council of Scientific Unions (ICSU/AB). The criterion proposed by this body was to select the journals which collectively accounted for 80% of the coverage of the major indexing/abstracting journal _ in each area (chosen as Biological Abstracts and Engineering Index respectively). This approach yielded 1333 journals in the life sciences and 732 journals in engineering. Each list also included a subset of 100 journals of particular relevance to scientists in developing countries on the basis of their subject coverage and practical, more 'development-oriented' orientation.

These lists were extensively distributed and greatly appreciated. But it was suggested that the criteria for selection of core journals should be more flexible to account for diverse user needs. Based on this experience UNESCO/PGI published in 1986 a core list of journals in the earth sciences (PGI-86/WS/25) prepared by the International Council for Scientific and Technical Information (ICSTI), the sucessor to ICSU/AB. This list contained a total of 1300 journals, including 700 selected on the basis of productivity (contribution to the GeoRef and PASCAL-GEODE databases), 250 less productive journals which are nevertheless important to general research activity, and 350 journals which are mainly descriptive and regional in nature, and which are particularly important for centres involved in regional studies. A special effort was made to

discipline (like the life sciences or the earth sciences) is several hundred and the minimum number in all disciplines at least a thousand. Of course, the majority of users' requests will involve a smaller number of journals, but scientific progress cannot be ensured without ready access to at least the core journals in each field. Thus the minimum total journal budget for 1000 core journals for about 100 developing countries will exceed $ 30 million annually (at an average subscription price of $ 300, including delivery).

- Decisions on what assistance to provide and to whom it should be provided are difficult. Journal subscriptions are only one part of the overall national scientific research budget of developing countries. International subsidies for journal subscriptions should therefore be evaluated on the same basis as subsidies for other parts of the research budget requiring convertible currency expenses, such as research equipment or training; as in all types of international assistance, a necessary condition should be that the national authorities themselves accord the concerned activities an adequate budget and priority.

- Long-term subsidies run counter to the approach of UNESCO's action, which aims at helping countries to help themselves through advice, training and catalytic support. A large-scale diversion of funds to operational support for journal subscriptions would reduce the very limited resources available to carry out the essential role of the Organization.

Pilot projects were, however, designed but did not succeed in mobilizing the necessary funds from extrabudgetary sources.

In 1984, following a proposal by the Scandinavian UNESCO National Commission, a study was prepared within the UAP framework concerning the establishment of a literature assistance programme. This study recommended that provision be limited to periodicals and that about 500 core titles be identified by monitoring and evaluating requests for journal articles through existing channels. Initially, a fund to defray charges for loan and photocopy services of major international document suppliers was recommended, along with wide publicity in developing countries to stimulate demand for such services. Gradually, starting in the second year, subscriptions to the identified core journals would replace the provision of interlibrary loans and photocopies and it was felt that the core demand would largely focus on a few priority disciplines, enabling a solid coverage with a relatively limited injection of funds. The scheme was proposed for implementation as a seven-year pilot project in

three countries in differing development situations, to be coordinated at the national level by a major national information centre in each country. The cost per country was estimated at about $ 1 million over the duration of the project. Attempts to find the necessary financial resources to implement this project were not successful - not even in the Scandinavian countries who had proposed the study. UNESCO accepts, however, under its Participation Programme and within specific extra-budgetary projects, requests for journal subscriptions, while trying to ensure that the requesting Member St tes are prepared to continue these subscriptions after short-term international assistance has been provided.

International provision of copies of scientific articles

When scientific articles are not available through national and regional journal holdings, a request is normally made to an international document supply centre such as the British Library Document Supply Centre (BLDSC). This procedure is generally used as a last resort because it is expensive ($ 5-10 per standard article, normally to be paid in convertible currency) and involves relatively long delivery delays (unless telefax is used, which adds to the expense and is not yet practical in many developing countries). One fruitful approach could be to negotiate with one or more such centres a bulk rate for provision of these services to institutions in developing countries, which would be designated in consultation with UNESCO. It would appear essential to expect a finaneial participation from the requesting centres in order to work towards self-sufficiency and to avoid frivolous requests, but an international subsidy greatly helps to develop such an activity, at least during a pilot period.

A pilot project for literature delivery was initiated in 1989 within the Regional Network for the Exchange of Information and Experience in Science and Technology in Asia and the Pacific (ASTINFO), which is a co-operative framework for development of information systems and services in the region established under UNESCO auspices in 1983. The pilot project involves assistance through the National Library of Australia which provides photocopies of needed scientific articles to the twelve developing countries who are members of ASTINFO over a period of three years. Each of the countries has received partially prepaid request forms, to be administered by selected major scientific and technolgical information centres. Photocopies of articles are provided by the Library at a cost of A$ 6 each, of which A$ 2 is paid by the requester and A$ 4 is defrayed by UNESCO. The pilot project has been financed initially by a UNESCO contract for US$ 11,000 with the National Library of Australia, which has ensured the provision of about 2500

articles. A similar contract has ensured the provision of another batch of about 2500 articles and a third contract for an amount of US$ 15,000 will extend this pilot project to the end of 1993. A proposal for a five-year document delivery project is being prepared for possible extrabudgetary funding.

UNESCO, through its General Information Programme, has also contracted the British Library Document Supply Centre (BLDSC) and the French Institut national d'information scientifique et technique (INIST) to conduct a pilot project to assess the literature supply and demand patterns in more than 30 developing countries.

This project, subsidized by UNESCO, enables scientific libraries and research institutions in a selected number of developing countries to make requests for photocopies of articles from science and technology publications held at these institutions. Reports will monitor and analyze the volume and type of material requested. It is hoped that the reports will enable each country to improve its library collections and document delivery services and, as a result, a more effective information exchange network will develop within the countries and between them, using the technical guidelines issued by PGI. It is also hoped that this data could be used to design at a later stage projects on using CD-ROM and other optical media to increase the flow of scientific literature in developing countries.

Book donation co-ordination

Hundreds, if not thousands, of book and journal donation programmes exist in the world. Under such schemes, institutions and individuals with surplus documentation are encouraged to make them available to needy information centres, particularly in the developing countries. A major problem with such schemes is the cost of shipping the selected materials. Another problem is that they are usually more relevant to general needs than those of science and technology which, by definition, require the most recent information as a priority. Thus, for example, although back issues of journals are often donated, it is difficult to organize donation schemes for current issues of scientific journals which represent the greatest needs. Recent evidence suggests that many of the book donation schemes are less effective than expected. The most obvious reason is that the overwhelming majority of such schemes are operating on a donor-led basis only.

One of the most successful of the scientific literature donation programmes is that of the International Centre for Theoretical Physics (ICTP) and the Third World Academy of Sciences (TWAS). This scheme was initiated by ICTP some

years ago to provide universities in developing countries with books, journals and proceedings. The publications are normally donated to ICTP on a regular basis by libraries, publishers, international conferences and international organizations. For example, an agreement has been established with North-Holland Publishing Company, the World Scientific Publishing Company (Singapore) and the Physical Society of Japan to provide ICTP with 150 surplus copies of each of their publications for distribution to libraries in developing countries.

Special reference also should be made to the book donation programmes operated by the Canadian Organization for Development in Higher Education (CODE), the American Association for the Advancement of Science (AAAS), the German Foundation of International Development (DSE), the Australian Centre for Publications Acquired for Development (ACPAD), the Swedish Agency for Research Cooperation with Developing Countries (SAREC), the International Campus Book Link, ICSU Press, professional associations, scientific unions, AUPELF/UREF (French speaking universities)...

The only way for existing book donation schemes to overcome some of the problems they are facing is for them to be recipient or request-led. This presupposes that potential recipients will have a knowledge of what is available and from what sources and that donors will have some awareness of, and sensitivity to, the needs of the recipients.

A database has been established by TWAS under a UNESCO contract. This database records the available publications (about 150,000 books, journals and proceedings) and both donor and reciepient interest by subject and level against which requests can be matched. The list of recipients contains 2,256 addresses, whereas the list of donors is limited to ten addresses of the major donors. The inventory of available publications is automatically updated on the basis of the shipments made.

Another database on book donation programmes is being established by ICSU under another UNESCO contract which records at present more than 100 donors.

These databases would facilitate direct connections between partners. In the long run, shipping costs will be reduced and book donation schemes more request-led.

In October 1988, ICTP/TWAS organized a workshop in Trieste on "Increasing the Flow of Scientific Literature to Third World Institutions" which was attended by representatives of ICSU, UNESCO and several other concerned organizations. This workshop issued a recommendation to create a co-operative network on scientific and technological literature for developing countries which would coordinate and provide

information on existing donation programmes and the materials they provide, to explore additional sources of literature for developing countries and to help to identify funding to expand the scope of existing distribution programmes and to launch new ones. As a long-term objective, the network will seek to support scientific publishing in the South and dissemination of the resultant publications.

The lack of a network means that the same work of establishing contacts is being done over and over - and that many potential donors become overwhelmed by the logistics involved.

A meeting of librarians, participants in donation programmes and representatives of ICSU and UNESCO was held in Paris, on 11-12 March 1991, to examine the guidelines for the proposed network. The participants foresaw a system where an interested donor could get in touch with the network and send in a list of the material available. The network would put the donor in touch with the most appropriate participating programme to handle the donation, to store the material, to find a recipient and to ship the material.

It was stressed that all the donations should be specifically asked for by the recipients. The purpose of these programmes is not to turn the libraries of the developing countries into dumping grounds for obsolete or unwanted material. The donated literature should be selected according to strict criteria, in order not to waste money on shipping useless material.

The network has now been launched by ICSU in co-operation with UNESCO. It has been named INASP, the International Network for the Availability of Scientific Publications.

INASP plans to run a seminar on the appropriate provision of scientific and technical materials at the Conference on Donated Book Programmes to be organized jointly by UNESCO, the Canadian Organization for Development through Education and the International Book Bank in September 1992, in Baltimore, Maryland (USA), "Dialogue of Partners".

Promoting CD-ROM publishing and use

CD-ROM could help libraries in developing countries, provide quick access to at least some of the critical literature needed by practitioners, researchers, educators, students who could become productive users .

Several conditions prevent the immediate widespread use of CD-ROM in developing countries. These include the lack of knowledge about the technology; reluctance of some publishers to allow republication of printed material on CD-

ROM; and the cost of maintaining subscriptions to journals published on CD-ROM.

Market forces are working to reduce these factors. Prices are declining and can be expected to continue to do so. And, as the medium gains popularity, publishers will be more willing to allow republication in this form. CD-ROM will help libraries in developing countries to leap ahead into the 21st century.

PGI has published a Guide to CD-ROM which is a practical source of information on CD-ROM hardware, software, services, products and related training opportunities. Also in 1989, PGI began to explore with the Japanese authorities the possibility of an extrabudgetary document delivery project mainly for the countries of Asia and the Pacific using modern information technology. The project would aim at the publication of core journals on CD-ROM, to be provided to libraries in developing countries according to their needs. It would be hoped that, after an initial injection of capital and a subsidy for operations over a period of about five years, the publishing system would be self-supporting, and the model could be extended to other developing regions. During a second phase of the project, vehicles for publication of scientific results from the region itself could be initiated.

The most notable attempt at publication of scientific journals on CD-ROM has been the ADONIS project which involved the dissemination of about 219 journals in the biomedical field on this medium for a two-year trial period. The aim was to demonstrate a technical solution which could ultimately be more efficient and less costly than photocopying journals for users, while providing some royalties to publishers who have felt that widespread photocopying by libraries is unfairly reducing their revenues.

The results of the trial have been sufficiently encouraging for the ADONIS Board to decide to introduce a commercial service in 1991 covering some 400 titles.

The journals offered are based on the list of titles taken on subscription by major pharmaceutical companies. The subject distribution is biology 19 %, chemistry 11 %, medicine 47 %, pharmacology 16 %, physics 2 %, veterinary medicine 1 % and general science 1 %.

An annual subscription fee of DFL 22,000 (about $ 12,000) is charged and royalties are to be paid depending on whether a library subscribes to the printed version of the journal. Royalties are based on the automatic recording for articles printed or transmitted over a network (but not for items displayed on screen).

A conference, held in Khartoum in 1990, illustrated the appropriateness of CD-ROM to developing countries. Two hundred persons, from 16 countries, participated in this first International Conference on the Use of CD-ROM in Developing Countries organized by the Sudan-American Foundation for Education, with UNESCO assistance. The verdict of participants was clear: CD-ROM services offer the single best solution to the "information gap" or "book famine" besetting users in developing countries. This view was not only expressed by librarians, who would be expected to embrace CD-ROM as a solution to gaining access to at least some current information, but it was held even more strongly by end-users, who comprised the majority of the participants.

Several training workshops were held in different regions to promote CD-ROM use in library and information work.

An international seminar on the use of CD-ROM and other optical compact media for the transfer of scientific literature took place in The Hague in 1991. This meeting was intended to lay the conceptual basis for pilot projects (US$ 18,000). The main working document, prepared by the International Federation for Information and Documentation (FID) discussed the technological, economic and copyright aspects of CD-ROM publishing. The meeting recommended that:

1)   UNESCO prepare a comprehensive study and a companion database on CD-ROM sites, equipment and local mastering initiatives;

2)   UNESCO explore with existing image-based products and services the possibility of collaborating in the provision of scientific literature on CD-ROM to developing countries with a view to launching a pilot project;

3)   that, in the longer term, a programme based on the findings of the pilot project involving as many developing countries as possible be designed in cooperation with development agencies and national governments.

The study and database are being prepared under a UNESCO contract. Negotiations of bulk subscription rate are under way with ADONIS and other similar services to provide CD-ROM products to selected sites in developing countries. As to the long-term programme, it will be designed progressively on the basis of the results of the other actions.

Concluding remarks

All these efforts have a convergent aim - improving access to scientific literature in the South. Other initiatives include promotion of scientific publishing in developing countries and twinning arrangements between libraries in order to provide advice, training, channels for information access and, possibly, equipment and information materials.

Emphasis on helping Member States to develop and manage their own document delivery services particularly through the publication of guidelines, advisory services and training activities should be continued.

Extrabudgetary support should continue to be actively sought for national projects to develop information infrastructure, including subscriptions to journals. However, it should be noted that funding sources like UNDP are very wary about including journal subscriptions in the projects they sponsor since, unless the national institution is able to continue the subscriptions, such international assistance is unlikely to have any appreciable development impact.

Abdelaziz Abid

Division:	SPECIAL LIBRARIES
Section/RT:	SCIENCE AND TECHNOLOGY LIBRARIES
Joint Meeting with:	

$$QS-SCIE-4(WS)-E$$

WORKSHOP THEME (IF APPLICABLE):

AVAILABILITY OF SCIENCE AND TECHNOLOGY INFORMATION IN DEVELOPING COUNTRIES: CHALLENGES AND INNOVATIONS

Science, technology and libraries in French-speaking Africa

by HENRI SENE

Director, University Library, Dakar, Senegal.

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Science, technology and libraries in French-speaking Africa

by HENRI SENE

Director, University Library, Dakar, Senegal.

At the second conference of government ministers in charge of applying science and technology to development in Africa, which was held in Arusha, Tanzania in July 1987, the experts who organized the conference stressed that among the scientific and technological services which African countries ought to set up as soon as possible, great importance should be placed on setting up national information systems and tying them into related regional and international networks. [1] In fact it is only recently that decision makers in African countries generally, and French-speaking Africa in particular, have become aware of the usefulness and necessity of creating and organizing national information and documentation services to manage and diseminate scientific and technical literature.

In most countries of the Maghreb (i.e. Morocco, Algeria, Tunisia) and Black Africa where French is used as an official or working language, or as a language of instruction, it was in the 1970s that the first libraries were created with the aim of supporting teaching and research programs, and efforts to popularize science and technology. The creation of those information centers at that point in time followed in all cases the opening of secondary and post-secondary level teaching

establishments in scientific, technical and professional fields. Following on these institutes of technology, polytechnical schools and advanced technical and professional teachers colleges were established.

The latest edition of the directory of higher teaching establishments of AUPELF-UREF [2] (in English, the Association of partially and wholly French language universities) lists forty-five teaching institutions in Black Africa and the Maghreb which offer general education or a more specialized program in science and technology (e.g. food technology, electronics, mineral resources, metallurgy, etc., etc.) This figure does not include university science faculties.

This recent development is founded on the recognition that underdevelopment in Africa is closely linked to the lack of training and education in science and technology. The first step was therefore to train a body of engineers and technicians to take charge of projects and programs aimed at improving living conditions for the population at large, programs in the fields of education, health, industry and agriculture. Hence the effort expended these past twenty years by the majority of African countries to promote science and technology at the level of teaching and research.

The institutions which we are referring to had in the beginning small basic collections of documents in science and technology. These were important for young institutions, but unfortunately most had no long term programs of acquisition and

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development and were thus prevented from growing as they should. Because their support functions had not been carefully conceived and planned, most of these libraries vegetated. The absence of proper school libraries in the field of secondary technical and professional education in French-speaking Africa is one illustration of this. As C. Chetsanga wrote: "The instruments for maintaining technological development in Africa are, unfortunately, being put into place too slowly to meet the needs and expectations of a rapidly growing African population. Leaders have long promoted the development of science and technology in principle but not in action." [3]

In the field of higher education the situation as regards documentary resources seems to be brighter. Here an effort has been made not only to endow teaching institutions with a collection of books and periodicals adequate to the needs of students, teachers and researchers, but also to provide these libraries with at least the minimum of human and material resources necessary for organizing and managing the information. A questionnaire sent to scientific and technical libraries in French-speaking Africa has elicited sufficient data to give us a picture of the current situation in these institutions. Responses were forthcoming from twenty-three libraries in the following countries : Algeria, Benin, Cameroon, Congo, Gabon, Morocco, Niger, Senegal, Togo, and Tunisia. Questions dealt with personnel, users, physical location, acquisition, budget, exchange, ILL, networks, new technology, education, and cooperation.

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In all these countries, science and technology libraries employ full time professionally trained staff (with one single exception). The majority of these establishments also have administrative and service personnel. There thus seems to be no problem finding qualified staff to manage these libraries. However the majority of respondents indicate that they have no permanent training program for their technical staff. Those few libraries which provide their staff with continuing education do so generally by sending their staff to do a practicum elsewhere. Participation at training seminars was also mentioned. Some libraries also organize specialized technical workshops for their professional staff. In a general sense, personnel employed in science and technological libraries have received a basic professional education but encounter difficulty in upgrading their education in their specialties either at home or abroad. This is a definite handicap as information technology, not to mention the fields of science and technology themselves, are in a process of rapid evolution. Professional librarians must adapt to these changes if they are to interact with the international community, participate in networks, or modernize their own structures.

The majority of respondents declared their physical premises to be satisfactory and functional, answering the needs of their users. This situation seems to be due to the fact that these libraries are generally located in relatively new buildings where plans for the inclusion of a library had been in the works from the beginning. On the other hand, being for the most part specialized

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school and institutional libraries, their clientele is smaller than that of central or of university libraries. These latter submitted responses which indicate that their present premises no longer suit the needs of their users. With the number of users still growing, they have in effect reached a saturation point.

The material and financial resources available to allow these libraries to operate and to continue to acquire material varies from one institution to another. None is financially autonomous. Their operating and acquisitions budgets, where they exist, are a part of the budgets of their parent organizations. All of the respondents declared that they could not significantly upgrade their collections because of the modest financial resources available to them and because of the relatively high cost of books and periodicals in the fields of science and technology.

Most of them are therefore dependent on gifts and outside grants to update their holdings. French and Canadian cooperation, the British Council, AUPELF-UREF (see above) and in recent years the American Association for the Advancement of Science (AAAS) have all played an important role in these programs. To give just one example, collection development in the library of the Polytechnical School of Thies, Senegal, is subsidized annually to the tune of 75% by CIDA (Canadian International Development Agency).

If they were left to their own financial resources, these libraries would be in no position to update their holdings on a regular basis. All of the libraries which we surveyed had recourse to external sources to subsidize their acquisition programs. This

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help, whether bilateral or multilateral, is necessarily limited in its scope and its diversity. It cannot meet the needs of the libraries or of their users either in quantity or in quality. It is easy to understand, given all of these factors, why the collections in question are inadequate to meet the demands placed upon them and even unsuited to their users. There are however some exceptions, notably the central libraries of Algiers and Dakar. These two institutions, which benefit from reasonably substantial economic resources, and with some external assistance as well, manage to maintain an acquisitions policy for their more important collections despite the constant rise in the cost of printed materials.

The libraries that responded to our survey appear to have collections consisting mainly of printed documents, principally monographs and periodicals. In certain cases theses and essays originating in the parent organization constitute the greater part of the collection. We must add here that in light of the relative scarcity of scientific publication in Africa, most purchases in these disciplines originate abroad, especially in France. For those countries with non-convertible currencies, these purchases represent a flight of funds which the authorities do not view with favor. Generally libraries face many difficulties updating their collections from foreign sources. Aside from the financial situation, there is also the difficulty of identifying suppliers and keeping abreast of new releases.

In terms of equipment, traditional library equipment (i.e.

card catalogs, shelving, display cabinets, etc.) is to be found in all the libraries we surveyed. The situation varies considerably when it comes to more specialized items, such as photocopy equipment, binding equipment, and A-V readers. Generally the equipment is not operating well or is difficult to operate because of lack of maintenance or servicing.

The use of computers in these African libraries is relatively rare. Of the respondents to our survey, only eight admitted to having a micro-computer. The central libraries of Algiers and Dakar with a complement of four and ten micro-computers respectively are rather well off by comparison with most African libraries. Those computers are mainly used to handle data bases created inhouse or acquired abroad. Other libraries use them also to handle textual materials and for numerical or statistical analyses. The most often used software packages are Minisis, Texto, Super-Doc, and especially CDS-ISIS. Computers help libraries to offer the following services to their users : lists of recent acquisitions, bibliographies, and selective dissemination of information. Those libraries not yet owning computers stated that it was their intention to acquire a micro-computer in the near future. All the libraries indicated that they intended to automate certain operations (e.g. acquisitions, circulation, ILL, serials management) and create local data bases such as bibliographies of theses.

From the foregoing, it is clear that the general use of computers as a management tool in the majority of science and

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technology libraries in French-speaking Africa is far from being a reality. Whereas a small minority have begun to experiment with various automated functions, most have yet to acquire the most basic computer equipment, and must perforce continue to operate with manual systems.

Among the libraries we have been discussing, only a very few have begun to use such new technologies as compact discs (CDs), videocassettes, memory cards, and so on. Their modest resources plainly do not permit the purchase of such items nor do they even envisage their acquisition in the foreseeable future. Choosing such new technologies, with attendant costs of equipment and maintenance, subscriptions to data bases and telecommunications networks, as well as connect-time costs in the case of online searching, would place too heavy a burden on their present meager budgets.

For this reason all the present examples of the use of new technologies in French-speaking Africa represent foreign initiative and financing. In this regard let me cite various projects financed by UREF (Universite de Reseaux d'Expression Francaise), BIEF (Banque Internationale d'Information sur les Etats Francophones), by French, Belgian and Canadian cooperation, and by the AAAS. Since 1989 UREF and BIEF have worked to establish programs to allow Third World universities to have access to bibliographic and textual data bases used in the developed world. The program set up by UREF operates in Ivory Coast, Egypt, Morocco, Madagascar, and Senegal and allows access from university and research libraries to data

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bases via Questel, Europeenne de Donnees and Sunist. All the costs associated with this program are paid by UREF.

UREF has devised another program called SYFED (Systeme Francophone d'Edition et de Diffusion). The aim of this program is to promote and demonstrate information products for advanced teaching and research, using new information technologies. It is also aimed at setting up local data bases accessible to both the developed and developing worlds. There are currently SYFED programs in Abidjan, Alexandria, Antananarivo and Dakar, with plans to expand into other African countries.

The central library of Chaikh Anta Diop University in Dakar has been conducting an interesting experiment in the use of CDs since 1988. A data base searching service on CD-ROM has been created with the help of BIEF, AAAS, and French cooperation. This service now offers users access to twenty-four CD data bases in several scientific fields, using three CD readers. The science and technology university in Masuku in Gabon possesses the CIRAD and BIEF CD-ROMs but lacks the reading material to complement the research procedure.

Despite these developments we should not forget that most libraries, especially those in the scientific and technical fields, cannot look forward to new technologies in the foreseeable future, because of lack of funds. We should also point out that the future of the programs we have just described cannot be taken for granted, because they were planned and directed from abroad. To forestall any danger to their continuation, political and institutional

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measures should be adopted to create the necessary human and material resources to enable Africans to assume control of each phase of these programs. To operate and promote national information and documentation services, a few basic steps ought to be taken : train the personnel required to manage the kind of programs we have mentioned, build adequate facilities, update and maintain collections, carefully define national programs to develop scientific and technical information systems.

Such a plan ought not to be restricted to libraries but should be part of a larger strategy within each country. In effect, "to be in a position to make relevant technological choices it is obviously indispensable to have a very clear idea of all the possible options. It is therefore necessary to have access to a national information system and adequate scientific and technical documentation if possible tied into an international data base. The setting up of such information systems should be one of the highest priorities in any national plan to promote science and technology in Africa." [4]

Organizing an integrated national information system presupposes the existence of a certain number of documentation centers related to one another in a formal framework. The aim of such a framework is to rationalize and harmonize management policies in order to facilitate the exchange of information within the system. In most of the countries which we have been discussing, there are several science and technology libraries attached to teaching or research institutions. Our survey showed that there is

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generally little institutionalized cooperation between these different libraries. Outside of Senegal, where there is a network called RIDES (Reseau des Institutions Documentaires de l'Enseignement Superieur) connecting all the science and technology libraries in the country, we can cite the example of a geoscientific network in Algeria. But aside from these two examples nothing of an organized or structured nature seems to exist elsewhere. Exchanges between other libraries are informal and are based on personal connections. ILL (inter-library loan), especially between countries to obtain journal articles, and the exchange of duplicate materials between libraries within a country seem to be the extent of cooperation. In the case of some libraries, cooperation also entails human exchanges in the form of a visit or practicum. In Senegal science and technical libraries are currently working together to establish a union catalog of theses and essays within the RIDES network cited above.

Our survey showed in a general way that cooperation and exchange within any one country are of little significance, often non-existent. Even between nations in Africa such cooperation is poorly fostered. On the other hand, those libraries which do practice interlibrary loan and have an active exchange policy, generally deal abroad, with libraries in developed countries, especially in Europe. This paradoxal situation arises from the fact that it is very difficult to maintain an exchange and loan policy without a minimum degree of organization and coordination on the national level. If you add to these institutional failings the

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economic and administrative problems that we spoke of earlier, you have a sense of the difficulties over which even the most dynamic and enthusiastic professional librarian has little control.

We will not belabor the point about the lack of financial resources facing all these libraries but there is a high cost attendant on doing ILL transactions with the CNRS or the BLDSC which taxes our libraries sorely. Even in cases where libraries are willing to lend or borrow, postal delays or customs duties on printed matter are so onerous in some countries as to effectively discourage foreign exchanges. It is the combination of all of these factors which has put the brakes on the development of scientific and technical information in Africa.

Science and technology libraries in French-speaking Africa are no exception to the general rule which applies to Africa as a whole. Whereas the majority of these countries already have the basic human resources, it is nevertheless a fact that the material and financial means and the institutional framework which would have allowed the development and promotion of scientific and technical literature are sadly lacking. Nearly all of these structures are largely dependent on foreign sources for funding. All of this leaves the information field in a precarious situation. Although the economic and financial difficulties facing African nations explain in part this dependency on foreign sources, the situation is aggravated by the nearly universal absence of a national policy on scientific information. Bilateral and multilateral assistance agreements adopted in recent years have

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certainly permitted some progress, especially in the field of education, but have yet failed to encourage autonomous growth and development. It is necessary to reverse the present trend and create a situation where scientific and technical documentation services are active participants in the dissemination of information coming from abroad and also in the elaboration of an indigenous system.

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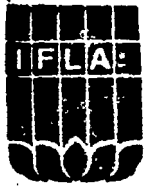
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Division: SPECIAL LIBRARIES

Section/RT: SCIENCE AND TECHNOLOGY LIBRARIES

Joint Meeting with:

96-SCiE-5(WS)-E

WORKSHOP THEME (IF APPLICABLE): Availability of Science Technology information in developing countries: Challenges and solutions

Productivity, Impact and Quality of Scientific Work at the UNAM: Actions for their Acknowledgement.

por:

Piedad Déctor

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Estimated number of participants the meeting:

Abstract

In view of the need to prove their production level, as well as the impact and quality of the results obtained in their works, researchers of the Scientific Research Sub-System of the National Autonomous University of Mexico (UNAM) require support which facilitates this task.With this purpose the Scientific Productivity Indicator Unit, whichwill start its activities this year, was created. It will have twodatabase: the firts one with contain all the Sub-System's researchers printed works, and the second one the citations to those works, in order to eventually start definition and analysis of indicators on intellectual scientific activity and its application to inherent scientific policies.

MISSION

To realize a systematic support program for the Scientific Research Sub-system (SIC) of the National Autonomus University of Mexico (UNAM), which will allow the researchers to prove their production level, as well as the impact and quality of their work's result, developing for that matter the adequate indicators, quantitative as well as qualitative. This will allow researchers to have the necessary means to support proper recognition and, on the other hand, it will give the bases to carry out the rational planning of our country's scientific policies.

BACKGROUND

When the National Researchers System (SNI) was created by a 1984 presidential decree, Mexican researchers were confronted to the fact that one of the requisites to enter into the System was to supply the bases to measure their scientific work's impact. Besides the SNI,there are other recognitions such as the Academic Personnel Productivity and Performance Stimulus Program, granted by our University.The researcher also requires information that gives him the opportunity to be considered for national and international awards,as well as to be able to defend contractings, promotions, labor definitiveness, or to apply to become a member of professional associations or even invisible colleges.

One of the already known and used forms to measure such activity is through the citations their peers make to their published works.

Now, although some of this information can be obtained from the Science Citation Index, the search has several implications such as time, difficulty to handle the Index, and costs.

When the researcher goes to the printed Index to retrieve his citations, the time he spends is proportional to the number of his citations, contained in the Index. This lapse causes detriment of his purely scientific activity, affecting not only him but his work group,

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formed by his research assistants, who frequently help him in his searchs.

Another already mentioned point is the difficulty in handling this Index to retrieve information. This implies personal librarian assitance, for if the researcher hasn't used this source before, it will be practically impossible for him to have access to it by himself immediately. On the other hand,this lack of experience can result in a failure to find all the citations or in finding citations belonging to a different author (an homonymous, for example).

The facts exposed make evident the need to count on professionals who dedicate themselves to this task and, furthermore, the possibility that this work might have some transcendence. This transcendence is centered in two aspects: the first one refers to the researcher's recognition not only in the university ambit, but also nationwide and abroad. The second one refers to formulating indicators that,together with others,will allow a rational planning of scientific policy in our country.

The process to be followed after a professional librarian has carried out the searches and gathered the information, is to enter the data in the databases which contain all the researcher's curriculum, and that have been formed by: the researcher's own data, supplied by himself; citations to documents not contained in the Science Citation Index, information from other indexes, etc., so that the information gets concentrated in one place, through databases developed for this purpose. These databases may give place to different studies which allow us to elaborate specific indicators whose main function will be to help evaluating production, impact and quality of the researcher's work.

Scientific indicators should support the scientific policy of academical institutions where research is done, such as our

University, offering for that matter evaluation judgements related to science and technology,to help decision-takers in the mentioned fields.

Following the former criterion, which points out the need of a series of services gathered in one agency which is the only one in the UNAM to offer science indicators as its major service, on June 17th, 1991, the Scientific Productivity Indicator Unit (UIPC), subordinate to the Coordinating Office for Scientific Research (CIC) was created.

The Coordinating Office for Scientific Research embraces: 16 Institutes: Astronomy Institute, Biology Institute, Geology Institute, Geography Institute, Physics Institute, Chemistry Institute, Mathematics Institute, Biomedical Research Institute, Geophysics Institute, Applied Mathematics and Systems Research Institute, Engineering Institute, Materials Research Institute, Marine Sciences and Limnology Institute, Cellular Physiology Institute, Nuclear Sciences Institute, and Genetic Engineering and Biotechnology Research Institute;
7 Centers: Scientific and Humanistic Information Center,Instruments Center, Atmosphere Science Center, Nitrogen Fixation Research Center, Technological Innovation Center, Science Communications University Center, and Ecology Center;4 Programs: Food University Program, Energy University Program, Enviroment University Program, and Space Research and Development University Program.

PRESENT SITUATION
Though the Indicator Unit was recently created, the works for its integration were developed from mid-1990.

Initial activities consisted in a series of studies which permited to determine, for instance,which should be the necessary tools to, besides obtaining the citations, improve their display through the application of several softwares.

Besides, other studies were done in order to evaluate different ways of access to Science Citations Index, which is produced by the

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Institute for Scientific Information (ISI).
The SCI today is presented in three formats, each one of them with
its own peculiarities. So, the Indicator Unit was faced to the need of
making a comparative study in order to establish which was the best
option to offer the required service.

This study included the following variables: cost, updating, computer
and telecomunication equipment requirements, information display, and
continuous access. Though in the "cost" variable the information is
presented in a qualitative form, numeric values were used to determine
the amounts, in this case the price in dollars.

To select the most adequate format, it was necessary to analyse each
one of the variables, geting to the conclusion of the CD-ROM being
the best option.
Within the "cost" variable, in actual terms, annual subscription to
the CD-ROM version of Science Citation Index is the lowest one for
us.Besides, we must consider that the largest the use of the
compact disc, the lowest its cost, significantly.

The format that assures a best "updating" is On-line. Nevertheless,
this situation was considered nor-relevant, since experience has
demonstrated that it is not necessary to make weekly revisions to
get the newest citations to the researcher's works. In general terms,
it's more adequate to make trimestral updatings.

As far as the SCI printed version is concerned, the "computer
equipment" is not necessary. Nevertheless, consulting it is much more
slow and arduous, which implies a harder personal effort. On-line and
CD-ROM formats do require computer equipment, but in CD the equipment
is less sophisticated and cheaper in comparison to the equipment
required to operate the SCI On-line version.

If we add the cost and rates of the "equipment and telecomunication
services" to the computer equipment cost, this option doesn't appear

to be the most adequate.

In regard to the "information display" variable, it results defficient
in all three cases. In the printed format, the type is too small,
even more than the type used in the Mexico City telephone directory,
for instance. And as to the CD and On-line displays, the information
obtained is fairly complicated for the researcher and most of the times
it is necessary to make "translation" of it.

AUTOMATION PROJECT
Once the problem was outlined and after having realized the comparative
study between the different SCI access formats, the development of a
design to implement the selected option was undertaken.

In this case it was considered that the mentioned design would have to
be set forth in several stages, due to the previewed evolution of the
Indicator Unit activities.

FIRTS STAGE: CITATION SEARCH
In this stage, citations in the SCI and other sources to the
aproximately 2,000 academic workers who integrate the Scientific
Research Sub-system will be obtained. Of these academic workers, near
the 55% has a researcher appointment. The remaining percentage
belongs to the academical technicians whose most part support directly
research works.

The service will be offered to each and every researcher and includes
two major activities. The firts one is an initial longitudinal
-retrospective research from 1980. The second one offers the
possibility of a permanent trimestral updating.

In an immediate way, these actions will allow the Indicator Unit
to integrate two kinds of databases. A general one, divided in two
parts: the firts part will have all the academic worker's articles,
and the second part will have all the citations to those articles,

which may only be consulted at the Unit. The other kind of databases will have an individual approach, and they will be installed for each one of them in their workplaces.

As far as the SCI is concerned, it presents a format hardly understandable for our users, besides to the fact that they require the data presented in a readable form. This, added to the need to count on databases, implies the application of different softwares that translate information for the researcher/user, and give to him a more complete presentation, with graphics, for instance.

Among the usable softwares in this stage are database management systems, (such as Micro CDS/ISIS), electronic worksheets (LOTUS 1-2-3), graphics systems (Harvard Graphics), and word processors (like Word). It is right to make clear that, concerning the database design, utilization of the MARC format is being implemented, in order to guarantee an easy information transfer with other bases.

For the handling of the programs mentioned above, at the present time the Indicator Unit personnel is being trained through several courses, in order to offer proper application.

REQUIRED EQUIPMENT
For this first stage, the acquisition of 8 personal computers with a 40 MB hard disk, 1 PC with a 80 MB hard disk, 1 PC with a 200 MB hard disk, 5 compact disk readers, 3 laser printers and 2 dot matrix printers has been approved. The 200 MB hard disk computer has also a very fast processor (33 MHz) with the purpose of taking control of every process, as well as handling the database which will contain the references to the works published by the Subsystem researchers.

NEST STAGE: PERIODICAL REVISION OF SCIENCE CITATION INDEX
Withing this stage, two important activities are planned.

The firts one consists in carrying out trimestral revisions to the SCI, as well as to the researcher's curricula, in order to update the databases where the citations to their works will be stored.

The second important activity will be oriented towards making bibliometric studies which allow us to propose new indicators, quantitative as well as qualitative, that support actions intended to measure productivity, impact and quality of the Subsystem researchers work. This implies, mainly, consulting the citation databases generated by the Unit, and permanent revision of the literature related to the mentioned subjects.

PERSONNEL

The academic personnel required to perform these services must be highly specialized, with a librarianship carreer or equivalent experience.

In order to achieve exhaustive and flawless SCI searches (without mistaking homonymous names, for instance), it is necessary for the librarian to know how to handle the index. This professional must also have experience on CD computer searches, as well as on different softwares, in order to apply them in the mentioned tasks.

To carry out an initial evaluation of the personnel already working at the Unit, a list was formed including functions and activities, which allowed the authorities to know staff levels and preparation, as well as their participation in such activities.

The next step was designing the organization chart, in order to locate the personnel in their competence areas, and finally to start their training in new softwares and search, selection and citation display. We are on that stage at the present moment.

FUTURE IMPLICATIONS

Other actions which are of great importance and interest for the Indicator Unit will have place in different times an places.

It is necessary, for instance, to establish relationships, at national and international levels, with institutions which are realizing similar activities at the present time. This will allow us to have a parameter to evaluate our work and, if it is necessary, to adequate new or different procedures which assure us to give a better service. Besides, trough these conctacts it will be feasible to set cooperation agreements to elaborate joint studies in areas or aspects relevant for both institutions.

Another important aspect is knowing and getting to count on technological advances which favor automated data systematization and so to improve also the storage, retrieval and display of our information. We want also, in the future, to have free access to the databases containing information on the UNAM researchers, so that we can count on a greater visibility of our researchers academic activity, trough communications of the institution itself.

Finally, other aspect we contemplate is to carry out all the activities necessary to be able to offer the information from our databases in compact disk format in the future.

IFLA GENERAL CONFERENCE NEW DELHI 1992
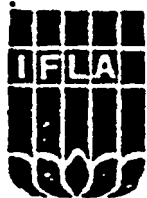
Division: special libraries

Section/RT: SCI-TECH LIBRARIES

97-SCIE-6(WS)

Joint Meeting with:

WORKSHOP THEME (IF APPLICABLE):

AVAILABILITY OF SCIENCE & TECHNOLOGY INFORMATION IN
DEVELOPING COUNTRIES: CHALLENGES AND INNOVATIONS

The Post-Perestroyika Sci-Tech Libraries : Will They Survive?

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Moscow, Russia.**

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Abstract

The economic and structural changes on the
territory of the former USSR have affected the fate
of Sci-Tech libraries, which are closely concerned
with the economy. Under the new administration,
Russia has no funds or inclination to protect
libraries. Highly qualified staff leave to work for
commercial enterprises. During the transition
period it is vitally important to retain the
skilled librarians as a core for future revival.
The possibilities are considered of international
help under the auspices of IFLA.

1. The general situation

To enable the reader to follow my arguments and suggestions, I will briefly
recount the general situation in Russia today. Since our last meeting, at
the 57th IFLA General Conference in Moscow, the Soviet Union has ceased to
exist and it is highly improbable that it will ever come back to life.
Besides the disappearance of the State itself, the whole set of the
integrating All-Union structures has also vanished and the Ministry of
Culture, Ministry of Finance and State Committee for Science and
Technologies etc., have been abolished. In the policies of all the newly
created states the desire to achieve full-scale national independence is
much stronger than the economic pressure for unification.

The prestige of President Yeltsin as leader of Russia is very high and it
enables him to undertake drastic reforms. A positive factor which gives a
certain hope for some help from within is the surfacing of rich and
ambitious shop-keepers, and private sector bankers and businessmen as well
as considerable freedom of action for directors of state-owned
manufacturing plants and institutions. These people and organisations could
start supporting libraries now. Unfortunately however, their charity is
directed instead towards children, war veterans and the churches. Either we
lack sufficient experience in organizing fund raising companies or these
people have been rich for too short a time to think of more visible forms
of charity and self-affirmation. Among the negative side effects of the
reforms, I should emphasize the following:

Inflation causes financial loss for all government-supported and
administration-dependent organizations.

Permanent confusion and the frequent changing of administrative structures
results in their inability effectively to solve problems.

There is much incompetence, self-interest and corruption within local and
municipal authorities.

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** note: The original English text of Andrej Zemskov's paper has been
edited and revised by Dennis Shaw, at his request, in order to clarify the
points made and to remove certain obscurities.

2 What is now happening in the Sci-Tech libraries?

The librarians of the Sci-Tech libraries of the non-Russian Republics do no: seem bitter and disappointed. As mentioned above, the national self-determination has favourably affected their fate and funds. Moreover, Diaspora renders support to the national cultural funds in some former Republics which is why the life of libraries there has not deteriorated. As for Russia, we observe some differentiation: those libraries, which had always been under the authority of Russia did not lose legitimacy but met only with economic difficulties, whereas those under the subordination of the former Union (and these are the major libraries) have suffered a double catastrophe. First of all, the All-Union ministries have been eliminated or placed under the jurisdiction of Russia, with the consequence that many staff were dismissed and their fate uncertain for two months until they were able to obtain other employment. This fate befell library staff at a later stage. Consequently, there was no help forthcoming from this source since the officials were fully occupied with the problem of their own survival and librarians were busy discussing the destiny of the officials. Major challenges are now being faced by the two leading institutions, The All-Union (now All-Russia) Institute for Scientific and Technical Information (VINITI) and the former Lenin Library. A fundamental difference was appa_ent between the Sci-Tech libraries and STI centres concerning their ability to adapt to the new conditions. For instance: "Informelectro" and the Sci-Tech Centre of the machine-tool industry were able to make an excellent entry into the market economy. They managed to expand the market to diversify their services and will certainly survive. But, for the remainder of the Sci-Tech libraries closely connected to the economy, the changes brought about had a devastating effect. The new administration in Russia has neither the resources nor the inclination to protect them.The government fails to allocate more money for acquisitions and running expenses for premises rental, technical support and postal services, and transportation even though the cost of these has risen tenfold in six months. Salaries fail to keep up with inflation and are not paid regularly. Efforts by libraries to develop a policy of charging for services are also diminished by the effects of inflation. The best staff are lured away by the economics of the private sector where salaries are 2 to 3 times greater. As a result of this brain drain the staff compliment of a library is transformed from a united and effective team into a disjointed group of people lacking a common purpose and unable to work effectively. So the future recovery of libraries is made that much more painful and difficult.

It would be incorrect to say that the higher authorities have completely forgotten libraries, but their concern is occasional, partial and unsystematic. President Gorbachev's decree of April 1991; "On Rendering Help to the Major Libraries", which was issued emotionally without proper consultation with major libraries, has not been fulfilled. Similarly ineffectual are the decisions of the Yeltsin administration. Consideration of the problems of libraries in the Russia Supreme Soviet, caused by the controversy over the Hasides' collection, is not likely to change anything because, at the executive level there will be further disagreement or sabotage. Up till now there has been a lot said about culture and libraries but these words have not been transformed into action by the government into a viable programme with adequate financial support.

As for the social life, the Moscow Library Association seems to reduce its activity. It may be the result of mental fatigue, but the effectiveness of

meetings, civil actions and demonstrations is at an all-time low and no-one pays attention to them any more. The recently created Library Charity Fund has, as yet, accomplished nothing tangible. The Association of Research and Sci-Tech Libraries has worked somewhat more effectively and at the last meeting in Lithuania the representatives of library societies of Lithuania, Latvia, Estonia and Moldavia spoke in favour of strengthening co-operation on a Union Catalogue and on the problems of interlibrary loans. Some profitable projects within the framework of the Association have been realized and a society of ISIS users has been established.

3. The facts

The amount of scientific and technical literature published in Russia is decreasing due to a shortage of paper. Besides this, some new publishing houses do not send a legal deposit copy to our Library. This has led to a reduction in domestic literature acquisition in 1991 by 20% as compared to 1990. Due to the shortage of hard currency the number of foreign books we get through the "Mezhdunarodnaya Kniga" agency has diminished by half, the number of foreign periodicals by 23% and I am surprised that the supply has not completely ceased. International book exchange, which provides more than half our foreign literature, has enabled us to smooth out the drop. There were 450,000 readers (12% fewer) and the circulation of items was 5.5 million less (-21%). Interlibrary loans have decreased by 50%. Note should be made of the high level of requests for the actively used databases on Ecology and High Temperature Superconductivity, also, the interest in book exhibitions on Marketing, Management, and Basics of Market Economics.

We are continuing the automation of library housekeeping activities based on a wide application of PCs: only a well-trained librarian who loves computers will be able to give professional advice on this. We are using our own or other legally acquired software. This may sound trivial to a foreigner but for our country, in which piracy and violations of copyright are widespread, this is essential. In co-operation with the Datalogic Company, the Library has created a bar-coded system for use in the physics and mathematics reading room. Automated systems have been developed for circulation control, ordering books and periodical parts, and control of author's abstracts. Local systems were also introduced for new periodicals and special publications such as "DataPro" and "Faulkner". We maintain the computerized Union Catalogue with financial support covering entry records from Sci-Tech libraries of all former Republics and following the ISDS practice.

The 57th IFLA General Conference and its workshops provided a creative stimulus for our Library. We have completed the plan for the Library's development taking account of the new economic situation. The increase cost for renting our premises made us reconsider our retention policy (on the ground of Andy Stephens' ideas on Life Cycle Costing) and we weeded out 440,000 items. Our collections now contain 8 million items. We took part in developing the general plan for the Russian Parliamentary Library and worked out the plan for its automation. The programmes for stock conservation, information storage on CD-ROM, and retrospective conversion are being worked upon now. Even though we all wish to enter the MARC-oriented community of libraries our MARC promotion is not very successful and the publication of the Russian translation of the UNIMARC Manual has been delayed by more than six months. We are developing desk-top publishing systems for the Library's transactions, Union Catalogues and Lists and

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Reference Materials. Commercial companies having their own photocopying
equipment are becoming more common in Moscow and as a consequence of the
reduced demand, a 50% reduction of staff in our copying division has been
enforced.

Before asking for help you have to show what you are doing to help
yourself. Table 1 shows the types of charged services and the throughput in
income units of 1000 roubles per annum. It will be seen from this table
that our income from these services has doubled each year since 1989 and in
1992 we have 880 agreements to bring in 3 million roubles. Most of the
services listed in the table are used by institutions rather than
individuals The revenue from photocopying, which amounts to about 5 million
roubles per annum, is not included here.

Table 1
Charged services: *net volume in units of one thousand roubles*

	Services	/year	1989	1990	1991
1	New acquisition services on customers' request		157	235	251
2	Subjects search on request, copying, delivery		83	154	619
3	Advertizing presentation		3	25	95
4	Bibliogrsphic processing		37	46	77
5	Consulting on library management		17	21	11
6	Sales of databases on floppy disks		15	50	50
7	Information processing and sales of computer time		-	-	169
8	Publishing and book sales		1	42	50
9	Seminars on UDC and norms		-	-	10
10	Others		3	9	56
	TOTAL		320	743	1388

The snowballing inflation reduces our efforts, and the revenues from
charged services in the total budget remain at the level of 10%.
Consequently, the income from these activities can only support salaries
and do not constitute a significant contribution to the acquisition of
literature or to the development, or on-going financing, of large-scale
programmes.

4 Viable solutions

The origin of the present problems is clear: it results from the collapse
of the economy and instability of the administration. The question in the
title of the paper should generally be answered in the affirmative - "yes!
some libraries will survive". But the main task of libraries is not only to
survive, we should work normally serving users and accumulating knowledge.
From this viewpoint the situation is rather complicated. We are now in a
crisis and the most acute period will last for two to three years. If the
world's library community renders no assistance, there is a possibility
that some small and medium-sized libraries will disappear and the large
ones will degenerate. During the transition period it is vitally important
to retain at least the highly skilled librarians as the keystone for future
revival. In any case we will be grateful for any sort of help. The question
is what kind of assistance the libraries need most to enable librarians to
support themselves and no longer remain losers or beggars.

First and foremost the help should be of a professional character. The
basic idea is that the result of this assistance should enable Russian
libraries, with their collections, databases and catalogues, to become open

to the world community. To achieve this we need exchange of specialists and technical and technological modernization. Reliable and lasting support could be given if Russian libraries were able to participate in some useful projects or programmes to earn some hard currency. The importance of humanitarian aid is obvious.

Help with subscriptions. This is an important and specifically professional kind of assistance. The full amount of our subscriptions to foreign publications is 5,500 titles (60,000 items per annum) of foreign periodicals and 8,000 foreign books annually. The total cost of subscriptions is $2.5 million p.a. and users' requests for foreign material accounts for 52% of total circulation. We have determined the core of our collection as approximately 1,500 titles being the 20% that meets 80% of users' requests, and our first priority is to appeal for any possible help to maintain this core at an approximate annual cost of $0.7 million. Of course, one library - even the major one - cannot cope with this task. But an attempt to co-ordinate the efforts of many library foundations or donors under the auspices of IFLA or any other organization could offer a real possibility of success. The initiative of the AAAS, which we are told has announced the intention to pay for subscriptions during the first two most difficult years, is very encouraging. Certainly, it is more sensible to undertake such support for the major national library with wide interlibrary loan facilities and with deposit obligations, rather than to dilute the help by spreading it thinly over a number of smaller libraries.

Assistance through job creation. It is obvious that a normal team cannot function relying solely on external help. The world has known analogous difficult situations in the past. I recollect the days of the Great Depression and the measures for social recovery of President F.D.Roosevelt. So, the task is to find or develop some projects where participation of Russian libraries will be useful, appreciated and paid for. Of course, there is not much scope in the information processing market and I feel that up till now Russian libraries are inadequately prepared for competition. Nevertheless, something could be done. We are ready to assist in subscribing to Russian Sci-Tech literature, including inaccessible "grey" literature; to create bibliographic records and English abstracts; to supply bibliographic databases or to generate specialized databases on request; to develop software or convert software for Russian-speaking users; and so on. The evaluation of the work and payment for it should be made according to recognised world standards, for to do careless work is to become corrupted. The best kind of help could be jobs for librarians in this country through participation in IFLA core programmes: ALP, UAP, UBCIM, PAC. The interactivities of libraries should be decentralized and direct contacts between libraries established. As for the financial aspects of the problem, it should be noted that today the average salary in our library is less than $120 per annum, so any project that gives a gain of $100 thousand to $150 thousand annually could support the whole of our library establishment.

Professional exchanges. First, we need to obtain proper information such as databases of the various grants which are so popular in the developing countries. This information is not at present available in Russia. We could send 30 - 40 specialists annually for 4 - 6 weeks training or work in libraries abroad. The topics in which training is required are: MARC format and bibliographic control, telecommunications protocols and practice, antivirus software production, fund-raising and how to promote the

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marketing of Russia-made databases and services.

Technical modernization and accessibility. This is a very significant
element in an attempt to make the Library, and its collections and
databases more easily accessible and thus potentially more useful for
foreign libraries. The emphasis should be placed on international
compatibility, primarily in the English language. We will do everything we
can, including re-cataloguing and translation, towards this end. To speed
the work we need assistance and would be grateful if we could obtain any
available software for English-Russian and Russian-English translation. We
wish to work more actively to introduce the MARC format in our Library and
any support would be welcomed. The Library's staff is working on a project
of creating a regional Moscow network interconnecting the Book Chamber, our
Library, the Parliament Library of Russia and the Patent Library. In
future, we plan to include the Central Medical Library, the Library of
Moscow University and the Library of Natural Sciences. Thus, a link with
our Library will eventually provide a gateway to the regional network
comprising the major special libraries in Russia. The supply of
telecommunications equipment (possibly second-hand) would considerably
facilitate access to the collections. We cannot purchase this equipment now
and without it we will stay disconnected from the input ports of the
international networks.

Humanitarian aid. Whilst expressing our gratitude for help one should bear
in mind its effectiveness. Last year we received 150 parcels and all of
them were given to the Library's former staff members - the aged and poor.
Thus, these parcels have not noticeably influenced the lives of Library
staff. (Our staff consists of 1050 persons and together with their families
the number involved rises to about 3000). I think it desirable that food
supplies should be sent directly to a specified library without any
intermediary.

Possible steps to be taken. In organizing international help we need to do
the following:
        Inform the world library community of the situation. I hope this
paper will achieve that end.
        Define the most suitable and effective ways and means of rendering
help.
        Initiate action to arouse public opinion and exert pressure on
political leaders in Russia and elsewhere to assist libraries.
        Start a fund-raising company with international professional control.

5. Conclusion

In my opinion, IFLA with all its experience, authority and well-developed
contacts with international organizations and its broad network of
Committees and Sections, is ideally fitted to cope with the tasks of
planning and management of assistance. I think it would be quite useful to
get Russian libraries involved in the realization of short- and medium-term
IFLA core programmes. The receipt of help in Russia should be decentralized
since one cannot rely on ministries, associations or single focal points.
These bodies do not have sufficient experience to act efficiently in the
matter. The most reasonable way is to set up several focal points or to
rely on twinning between libraries and through direct contacts between
individuals. By this means the necessary feedback may be established.

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Abstract of the paper to be presented at the 58th IFLA
Conference, New Delhi, in the Workshop on "Availability of Sci-
Tech Information in the Developing Countries : Challenges and
Solutions", 3 September 1992.

Access to Information and Science Development in the Developing World

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Information is a key to science development. After all science
is an activity taking place in information space: it is by
standing on the shoulders of giants - by making use of the
already available information (or understanding) - one sees a
little farther or raises the level of understanding through
acquiring new information. Access to relevant information is
thus crucial. But much of the information in science and
technology, as indeed in other areas of scholarship, is produced,
processed, packaged and marketed by very few countries, notably
the USA, the UK and the Netherlands. The abundance and the
variety of forms in which information is available and the costs
involved make access to relevant information pretty difficult
for scientists working in the developing countries. New
technologies - online retrieval and CD-ROM, for example - can
bridge the information gap between the industrialised and the
developing countries, but these technologies take time to get
established. Besides, the relative cost of accessing information
through these technolgies is unaffordable for most developing
countries. The inadequate access to current worldwide
information is reflected in low R&D productivity, poor quality

and low impact of developing country laboratories. Way to improve access to information in developing countries include: increased international collaboration (through bilateral agreements, TOKTEN, etc.), differential pricing by publishers of journals, abstracting and indexing services, etc., greater involvment of voluntary agencies, and increased participation by developing country scientists in international networks and invisible colleges. That these are easier said than done will be amplified with examples from India, scientifically one of the most developed of the developing countries.

We live in a divided world and those who live on the periphery ought to put in very much more to achieve even a fraction of what those who live in the centre can achieve with much less effort. Talk to any scientist or scholar working in a developing country, and you will know how difficult and frustrating it is to pursue a career in research - be it in the sciences, social sciences or the humanities. There are many factors for this frustration and the feeling of despair. One of them concerns "searching the literature" or seeking information, a seemingly routine but fundamental task.

Seun Ogunseitan, the dynamic Nigerian journalist-cum-information scientist, carried out a study on the status of scientific education in Nigeria in 1988. A senior University of Ibadan professor told him : "When you call some of us scientists, we laugh at ourselves. We know we can no longer make contributions to science. I do not know what my colleagues in

Kenya or London have found, for example. So I cannot cary out an experiment and believe I am on the path to an original contribution to the sciences. If I have been giving generations of students the same notes for the last ten years, I should not call myself a scientist". Ogunseitan says : "Many people in our (Nigerian) universities are not sure what is the state of science. Scientists often have to rely on what they are told, for example by newspapers, by friends or by 'Time' magazine. How can such people ever become authoritative and confident scientists?" In most Third World countries, the situation is no different. Even in India, considered to be the Third World's leading performer in science, many college professors are no better than the honest Nigerian professor interviewed by Ogunseitan.

The Centrality of Information

Access to information is crucial to the survival and every day operation of all men. The ease with which individuals, organizations and nations can have access to vital information for their operation, planning and decision making has a direct bearing on their success, power and competitive edge over others.

If information is a vital necessity for all men, it is even more so for scientists and scholars in their role as seekers of knowledge and performers of research. In fact, one can view research as an activity leading to a transformation from one level of information (or understanding) to another. A researcher

applies his mind to questions concerning a problem of his
interest, in the light of currently available knowledge - which
is often available in the 'literature' of the field and is
figuratively referred to as 'the shoulders of giants' - and tries
to see "a little further". Often individual researchers
interested in a particular problem area will have a better
appreciation of the area than can be soley attributed to what is
possible from the published literature, even if they cannot
articulate all they know in words or symbols. A major part of
research is to develop and translate this tacit knowledge into
the domain of public knowledge - through appropriate theoretical
and experimental approaches, observations, collection and
interpretation of data, explaining their findings on the basis of
available paradigms or thinking up new paradigms, etc.. When a
researcher makes substantial progress - when he has something
original to say - he presents his findings, which constitutes
the newer level of understanding, to the republic of science.
This he does by presenting a paper in a conference or publishing
in a journal or occasionally - as Pons and Fleischmann of cold
fusion fame did through a press conference.

The cognitive process leading to the generation of new
knowledge, which is the primary activity in science, necessarily
involves an interaction between the human mind and the already
existing knowledge. As no one is omniscient, a researchers'
ablity to create new knowledge is limited by that small fraction
of the vast pool of knowledge he has been able to take in,
although in theory it is possible for him to interact with any
part of human knowledge.

Thus, a researcher's interest or the ability of his mind is not the only element that determines the choice or the successful solution of a problem and the advancement of knowledge in general. Rather the key element is his ability to access the knowledge base. In general, the more well informed someone is in a problem area, the better prepared he will be to advance knowledge in that area. Of course, there are exceptionas - men like the mathematical genius Ramanujan, who in his brief life not only recreated de novo several monumental feats of great mathematicians of past generations without having the slightest familiarity with the 'literature', but also produced some of the finest and most original mathematics which to this day continues to baffle and fascinate contemporary mathematicians. Even lesser men stumble upon something of great significance thanks to serendipity. But, in most cases, success in science and other scholarly pursuits and the effectiveness of a researcher's performance are dependent, among other things, on his command over the literature and his information-seeking behaviour.

World distribution of Science and Scientific Information : The Centre Periphery dichotomy

Like everything else, science is not distributed uniformly among regions of the world or among different countries. In fact, the distribution of science - by whichever means it is measured - is even more skewed than the distribution of wealth among nations. Just about a dozen countries account for close to four-fifths of the world's published journal literature of science ! India is the lone Third World country to find a place in the top 12.

Several hundred years after the emergence of modern Western science and the near-total eclipse of pre-Western scientific traditions and knowledge systems - such as those in ancient and medieval India, China and Egypt - today we live in a world where only a small minority is involved in the both the generation of new scientific knowledge and its exploitation. Vast sections of humanity, living in the Third World, are mere bystanders, often not even realizing the consequences - not all of them beneficial and some of them positively detrimental to their interests - of such developments.

Today the world of science and technology is dominated by the industrialized countries of the North, notably the Group of Seven and the European Community. Japan is the only non-Western country that can boast of a scientific enterprise having achievements comparable to those of North America and Western Europe. This dominance is not confined to investments in science and technolgoy and generation of new knowledge. It extends to the production and marketing of S&T and technoeconomic information as a commodity, an activity in which the United States, the United Kingdom and the Netherlands excel.

Writing on trends in book publishing professor Philip Altbach of the State University of New York at Buffalo commented that, "The flow of knowledge and information is almost exclusively one-way - from the industrialized nations to the Third World and the creative and scientific work done in Third World languages seldom reaches and international audeience". For

example, of a total of over 55,600 titles translated in 1983, about 41.740 were originally written in just four languages - English (accounting for nearly half of the world's total), Russian, French and German. (The interest in Russian was largely a product of the cold war. The West, especially after the Russians beat the Americans in the space race by launching the Sputnik in 1957, was keen to follow scientific and technological developments in the Soviet Union and ordered massive translation programmes.) In contrast, only 322 Arabic titles and 148 Chinese titles were translated into other languages in 1983. Books published in other Third World languages were translated to an even lesser extent. Literally no one cares for what is not publised in the " Mainstream languages" of scientific and scholarly communication.

The situation with regard to journal literature is equally bad. Of the more than 3200 journals indexed in Science Citation Index (SCI) 1991, not even 50 are published from the Thrid World. Even among Third World journals indexed in SCI, not all of them are indexed regularly, year after year. Journals get in and get out of SCI. In the decade 1980-1989 SCI had covered more than 40 Indian journals at one time or the other, but only eight of them, viz. Current Science, Indian Journal of Chemisty sections A and B, Indian Journal of Medical Research, Journal of Scientific and Industrial Research, Proceedings of the Indian Academy of Sciences - Chemical Sciences, Proceedings of the Indian Academy of Sciences - Earth Sciences, and Pramana, have been covered by SCI in each one of the ten years. Two other Indian journals

which commenced publication in the mid-eighties, viz. Journal of Astrophysics and Astronomy and Journal of Biosciences, are also being covered by SCI without a break.

The problem of poor representation of science done in the Third World in international databases is well recognized. In fact, the late Professor Michael Moeavcsik convened an International Task Force in 1985 to discuss this issue and to suggest remedial measures. The Task force did come up with some very valuable suggestions, but the problem continues to persist. In 1988, two young researchers, both total outsiders to the library and information profession, Manorama and Anita Bhutiani, made a detailed study of the coverage of over 600 Indian S&T journals in international secondary services and reported that the coverage was much better in comprehensive abstracting services such as Chemical Abstracts and the INSPEC database.

Even if the journals are covered in abstracting and current awareness services, most Third World journals suffer from low circulation. Articles published in these journals, on an average, are hardly noticed and are hardly ever used by researchers elsewhere. Not a single Indian journal had an impact factor of greater than 0.6 as seen from Journal Citation Report 1990. In contrast, both Nature and Science had an impact factor of greater than 19.0, and Cell had a 1990 impact factor of 26.68 !

In papers published earlier, I had shown that most Indian and other Third World journals quote older literature (more than

ten years old) to a much greater extent than recent literature (less then four years old). And if one analyses, following Michael Moravcsik, the nature of relation between the citing and the cited papers (or the cause of citing a reference), one finds that most papers appearing in most Third World journals are derivative and routine and not original and pathfinding. We must admit that science done in India and most other countries of the South (but for rare execeptions) is peripheral to mainstream science. Rarely do we see Third World laboratories active in the initial phase of the logistic curve of the unfolding of the different stages of growth - viz. the birth, evolution and the closure - of a paradigm. Often papers published by Third World Scientists only provide additional evidence for an existing paradigm. No wonder then these papers do not form "shoulders" for scientists from elsewhere to stand upon and see further.

There are a few exceptions though. Wherever Third World scientists have better access to worldwide information there they have a chance to perform better. Partiale physics research in India is a case in point. Researchers at the Tata Institute of Fundamental Research (Bombay), Saha Insititute of Nuclear Physics (Calcutta), Physical Research laboratory (Ahmedabad), etc. regularly receive preprint announcements circulated by CERN, Geneva, and SLAC, Stanford. Many of them belong to international invisible colleges and correspond regulalry with their Western counterparts, as is evident from the large number of ``personal communication" entries in the list of references in their research papers. Also, they meet periodically at the annual

conferences on nuclear and particle physics organized by the department of Atomic engergy. Thus Indian particle physics researchers are doing will and certainly much better then their counterparts in clasical biology, earth sciences, etc..

Biochemistry (including molecular biology) is another area, where better information access has led to better performance in India. Thanks to the availability of funds for life science research in the United States, many Indian students of biochemistry get attractive post-doctoral and doctoral fellowships in US Unversities. These students act as informal communicators of informat eir friends back home. And everytime they come home - even on a vacation - they visit their alma matter and deliver talks as well as discuss with the students and faculty. Indian biochemists also have a Gordon-type annual conference, the Guha Research conference, and an annual meeting at a hill station named Mahabaleshwar (near Pune).

Yet another area where better access to information has led to better performance by Indian researchers is astronomy and astrophysics. Managed by a dedicated librarian - one of the best special librarians India has ever had - the Raman Research Institute library in Bangalore is a model third world special library and it has played an important supportive role in India's achievements in astronomical research in the past two decades.

In sum scientist in the Third world, with a few exceptions, produce very little of the world's new knowledge (as reflected by the literature), depend to a very great extent on the work

done and published in the advanced countries of the North, and are unable to contribute anything significant to the world's pool of scientific knowledge. Among the factors that help Thrid World scientists perfornmm better is access to information. But they have very little control over thee channels of communication and the cost of the information they need.

In times past, scientists the world over received much of the information in print-on-paper format. May be journals took a few months to reach libraries in distant lands - say in Bombay or Madras - by ship. But today, there is a tremendous difference in the way information is handled in the advanced countries and in the Third World. Thanks to advances in information technology, which have altered tremendously the way information is gathered, stored, sifted, processed, disseminated and retrieved, scientists in the North have increased their competitive edge over scientists in the South. This has led to a tremendous imbalance in the information situtation prevailing in the scientifically and economically advanced countries of the North and that in India and other Thrid World countries. Not only do countries in the South need to get the vast quantities of S&T information generated and processed in the North but also they need to go in for compatible technologies to facilitate the flow of information. This would mean a structural reorientation of the entrie gamut of information activities. It would call for the rapid introudction of computerised databases, online retrieval, CD-ROM technology, first-rate telecommunication networks, etc..

Database producers the world over are shifting their emphasis from print-on-paper products to magnetic tapes and CD-ROMs, so much so the pricing policies would soon favour the machine-readable forms, and scientists in the South would be forced to pay considerably higher sums for the printed products. The Mathew effect - the already priviledged will get more privileges - has already started operating ruthlessly in the area of access to documented knowledge as well. We are painfully aware that the Mathew effect has been operating to the disadvantage of the South in matters of attendance at international conferences, invitations to contribute to multi-authored volumes, and in the international award - reward system. Failure to reorient information services in the South will lead to rapid widening of the gap between the advanced and the developing countries.

Already, a large part of the Western World is interconnected through electronic networks (such at BITNET and INTERNET), and scientists in North America and Western Europe make extensive use of electronic mail to exchange information and data. Several electronic journals have come up, which are virtually inaccessible to Third World scientists not because of any deliberate policy of discrimination but because of the absence of the necessary technology in the Thrid world to hook on to the electronic networks. The mmedium is indeed going to have a large say in one's access to the message.

It is true that a few Third World countries (including India) are establishing electronic networks, international

gateways, CD-ROM facilities, etc.. But I am not satisfied either with the scale of the operations or with the pace at which things are happening.

Another problem that worries me is the change in the Western World's perception of information. Till a few decades ago information was condidered essentially a public good, an attitude that facilitated free flow of information and promoted research. Now, information is increasingly perceived as a commodity that should be priced like any other marketable commodity. The new inforrmation technologies which permit an unprecendented expansion of the ability to create, store and disseminate information, also encourage the chaotie proliferation of information resources and permit unprecedented control of access to that information, says Patricia Battin of Columbia University. "The ability to control access to information by charging a fee per use has serious implications for the individual researhcers as wll as the univerisities' capacity to provide the necessary information services to support scientific research". The implications are far more serious to Third World researchers and institutions.

Faced with rising prices of journals, books and information services dwindling budgets and the ever decreasing value of the local currencies thanks to inflation and devaluation, many Third World libraries find it impossible to meet even the barest minimum of their requirements. Hundreds of Third World research instituors do not get such vital current awareness tools as

Current Contents. How then can we expect them to go in for CD-ROM data bases, online retrieval facilties and communication with the rest of the world's scientists through E-mail, telex and Fax?

What Could be done ?

The problem of providing adequate access to information to devloping country scientists is indeed formidable and cannot be solved easily. However, we need not be put off by the enormity of the problem. I suggest a multipronged approach.

First, Third World scientists should be encouraged to do collaborative research with scientists in the advanced countries. This could be facilitated thorugh bilateral cooperative programmes (eg. projects under the Indo-US subcommission), exchange and sabbatical visits, etc.. Another mechanism which has worked very well in the case of India is the UNDP-funded TOK TEN programme, under which expatriate Indian experts (mostly working in the USA) are encourged to visit Indian laboratories for a period of a few weeks to a few months. Citation data clearly show that papers resulting from such international collabortions win on an average, many more citations than other papers originating from Indian laboratories.

Second, we should encourage builing up of many more centres like ICTP (the International Centre for Theorectical Physics, Trieste), the brainchild of Prof. Abdus Salam, ICTP has helped many a Third World physicist work in an atmosphere conducive for intellectual activity. It has a fine library and receives hundreds of researchers from all parts of the world.

Third, we should evolve a systems by which books, journals, current awareness and abstracting services and other information services are made available to developing country institutions and individuals at a reduced price. Differential pricing is not unknown. Many professional societies give concessions to student members, for instance. Citation Index databases are sold at half price to subscribers in developing countries. British textbooks are available as low-priced ELBS editions in India. All we need is to extend this principle to a larger area !

Fourth, we should encourage voluntary agencies to take active interest in science development. For example, expatriate Indian scientists in the USA have formed a group called IDEAS. This group could collect and send back volumes of journals to Indian institutions, take out subscriptions to costly journals on behalf of selected Indian libraries, and even alert Indian researchers to latest developments in different fields.

The Third World Academy of Sciences and ICTP, both led by Prof. Abdus Salam, have launched a programme of donating books and journals to selected recipients in the Third World. Other international agencies and foundations could initiate such programmes.

Fifth, efforts could be made at different levels to facilitate greater participation of Third World researchers in international conferences. For example, AAAS, ACS, APS, etc. can invite deserving developing country scientists to take part in meetings and meet their travel and conference expences.

Many of these suggestions might sound idealistic and rather
impracticable. But then we have the shining examples of men like
Abdus Salam, who brought his fame as an outstanding physicist to
bear upon his efforts in science development in the Third World,
and the lesser known Seun Ogunseitan of Lagos, who had nothing
but his genuine desire to achieve his goal and yet has done
extremely well in improving information access in Africa.

MANUSCRIPT COLLECTIONS IN INDIAN LIBRARIES WITH SPECIAL EMPHASIS ON NATIONAL LIBRARY.

By

MD. SHAMIM AKHTAR
NATIONAL LIBRARY
CALCUTTA.

148-RARE-1-E

Introduction

It is significant that man's intellectual progress and the systematic recordings of his achievements are a very late development. In the primitive age oral tradition i.e., the spoken word was the main medium of the transfer of human knowledge. Increasing needs and necessities caused to adopt or draw codes, signs and symbols based on ideologies which led to the origin of manuscript. MSS which initially means a drawing, a scratching or a writing of any kind, as distinguished from printed matter, is the most important source of information for a particular period of human civilization. Though it is difficult to ascertain its exact origin, it has been presumed that the first writing was done on soil by means of a human finger, followed by scratching upon trees and rocks. In order to reach the latest form of MSS i.e., a book, a document or the like written by hand in alphabets, a very large number of peculiar signs, symbols and scripts had been developed in the last five thousand years or so.

The importance of manuscript is significant for sufficiently notable reasons. Before printing, manuscript was the main source of information. It is the basic historical evidence. It is the original source for the reconstruction of the past, and the most important documentation for the interpretation of parallel experience as well as for the clarification of false testimony or blurred report. In this way every MSS has its personality and reveals the personality of the scribe as well as the characteristics of his milieu. Ancient cultures, traditions and characters have deep impact on modern progress and they are authentically represented by related MSS. Manuscripts have great research value which led to recognise its need and importance internationally. Consequently among other arts Paleography came into existence which is the foundation of all history. MSS even after its proper publishing cannot be declared useless and the Librarians try to conserve an original sample of all MSS of significance. At present every

country, every library in its capacity is serious to ensure proper collecting, proper use and proper preservation of manuscripts.

Manuscript collections in India

India is a land of very ancient civilization and manuscripts form a precious part of its cultural heritage. Manuscripts have been greatly responsible for promoting education, training and development of the country since the ancient period. For understanding the history and culture of India the literary treasures that we have in the form of MSS cannot be ignored. The main credit goes to the Sanskrit MSS which have been continuously active for over 4,000 years. In Sanskrit and other Indian languages a book is called "Pustaka" or "Pusta". Pusta which means modelling, as with clay or metal, gives an obvious reference to the ancient writing materials in the forms of clay-tablets and metal seals. The discovery of inscribed seals, pottery and metal pieces among the Indus Valley shows not only the knowledge of writing in ancient India but also the media and form of their use. The Vedas do presuppose a written form of speech or language. Greek sources mention the use of cloth and inner bark of trees in ancient India in early 4th century B. C. Kalidasa refers to the Birch Bark as ancient writing material and till recently this was in use in Kashmir. Palm leaf was the most common material in which the bulk of old Indian literature has been presented all over India. The oldest palm-leaf manuscript, found in Nepal is about 700 years old. The other forms of material used for writing are cloth, cotton-silk, wooden boards, leather, metal plates etc. As regards MSS collections in India it is difficult to make even a rough estimate of it lying scattered in many known and un-known places of this vast country. A survey through secondary sources reveals that more than 22 lakhs of Indian MSS are deposited in libraries both public and private and 10 lakhs of different MSS have been listed in printed catalogues during the past 150 years. With reference to an all India survey on Sanskrit MSS, a report of some places may be given as : Kashi Sanskrit Vishwavidyalaya has got perhaps the single largest collection of manuscripts in the country. There are nearly one lakh manuscripts in Kerala University Library. Research Societies and institutions have more than 10 lakhs MSS. There will be over

2 lakhs MSS in libraries and museums. About one lakh manuscripts are available in Hindu temples and Maths and in Ahmedabad city alone the Jain Mandirs possess 75,000 Vols. There will be about 2 lakhs manuscripts in the palaces of old princely States.

India has several reputed centres dealing with large MSS collections in various regional languages such as Tamil, Telegu, Hindi, Bhojpuri, Oriya, Bengali, Gurmukhi etc., alongwith Arabic, Persian and Sanskrit languages. Some of such leading institutions are :

(1) Government Oriental Library, Madras;

(2) Saraswati Mahal Library, Thanjavur;

(3) Asiatic Society of Bengal, Calcutta;

(4) Sanskrit College, Calcutta;

(5) Khuda Bahksh Oriental Public Library, Patna;

(6) Rampur Raza Library, Rampur;

(7) Salar Jung Museum Library, Hyderabad;

(8) National Archives of India, New Delhi;

(9) Rabindra Bhavan, Shantiniketan;

(10) Theosophical Society, Adyar, Madras.

On the basis of surveys, important catalogues and other studies, it is estimated that the total number of MSS in all the languages lying in public and private collections all over the country is over 300 million of which only about one million have been listed in printed catalogues. In order to identify these MSS,to catalogue and organise them and to make them available for proper use, some major projects are on which include establishment of Central Manuscripts Library, undertaking a detailed survey of MSS collections and preparation of a Union Catalogue of Indian Languages Manuscripts Catalogues.

Manuscripts in the National Library, Calcutta

National Library, Calcutta, though the biggest library in India, does not have a very large MSS collection. It is the repository of the printed cultural heritage of the country. However, its small holding on MSS represents almost all basic and important branches of knowledge to a great extent. MSS mainly in book forms, personal archives, bound volumes of correspondence,

loose letters and palm leaves include a major part which for their unique record and characteristics have proved their significance widely. Except the letters and correspondence in English the MSS are mostly in Arabic, Persian, Sanskrit, Bengali and Tamil languages. These MSS include authentic records, beautiful illustrations, fine calligraphy alongwith certain other qualities of interest. As regards the total number of MSS in the library, there are more than 3,000 vols. in different forms and a good number of valuable correspondence, diaries etc. All are broadly described below.

Manuscripts in the library in different languages and forms may be represented as follows :

Arabic	681	Paper MSS	Arabic Script
Bengali	181	" "	Bengali "
English	255	" "	English "
Hindi	5	" "	Hindi "
Persian	955	" "	Persian "
Sanskrit	790	" "	Sanskrit "
Tamil	36	" "	Tamil "
-	334	Palm Leaves	Tamil "
Urdu	21	Paper MSS	Urdu "

The National Library collection of manuscripts are mostly part of some gift collections belonging to eminent personalities of India which were donated by their heirs. Let us start with a few noted collections.

Buhar collection

This is the oldest gift collection presented to the library in 1904. In 1775 A.D. it was founded by Sayyid Sadruddin of Buhar who was very eminent for his love of learning as well as for his performance as Munshi to Nawab Mir Jafer, Shah Alam and Warren Hastings. This precious collection comprises 1,515 vols. of rare books and 952 vols. of MSS in Arabic, Persian and Urdu languages. The collection is extremely rich on all important subjects which include Religion (mainly Islam), History, important branches of Art & Science including Medicine, Astronomy, Philosophy, Music and many volumes on poetry. The speciality

of some of these volumes are, beautiful illustrations, styles of writing, authenticity of records etc. A few noted as most valuable are mentioned here.

Tarikh-i-Harat.

It is a unique history of Harat written in the biginning of the eighth century, A.H. by an author who was himself a witness to most of the events narrated by him.

Ajaibul Makhluqat.

A very valuable and rare cosmographical work composed in the biginning of the latter half of the sixth century, A.H.

Khawar Namah.

A rare narration in epic form relating to the warlike deeds of Ali (the 4th Caliph of Islam). Written in 17th century, this beautifully illustrated vol. represents the finest specimen of Indian miniature painting and calligraphy.

Sir Jadunath Sarkar collection

This is one of the important personal collections which was gifted to the library in 1959. Among its 2,500 rare vols. in different languages it has 206 Persian MSS on the later Mughal period (1659 - 1837) and the early British regime in India. These manuscripts are generally transcripts of rare originals scattered in different libraries of India and abroad. They contain in valuable personal notes and comments by the historian representing useful references to the study of Mughal History. Most noteworthy in the collection are :

The Akhbarat-i-Darbar-i-mualla and the Araiz-o-Faramin.

These are the Imperial Gazettes of the Mughal Government and are the most important sources of information on the administrative, social and economic policies of the great Mughals.

Haft Anjuman

A collection of rare letters representing the daily despatches

of the pursuits of Dara, Jaisingh's purandar Campaigns (1665) and his invasion of Bijapur in 1666. It is a very important collection of letters of Emperor Aurangzeb's time.

Ahval-i-Najeebuddaulah

A contemporary account of Nawab Najeebuddaulah who was raised to the office of Amirul Umara in 1756 and remained almost absolute master of Delhi until his death in 1771 A.D.

Thibaut collection

Belonging to the eminent lover of learning Dr. George Thibaut, the collection is one of the important collections presented to the Library. Having 410 MSS in Sanskrit languages the collection is rich in Indian Philosophy, Religion, Literature, History, Astrology etc. A few noted volumes are as follows :

> Brahmasutra Sankara-bhasyam, n.d.
> > on "Advaita Vedanta"
> Cayanakarikah, n.d., C. 17th century
> > on "Karmakanda"
> Gargasamhita, n.d., C. 18th century
> > on "Jyotisam"
> Sastradipikalokah, n.d., C. 17th century
> > on "Mimamsa"
> Pancatantram, dated Samvat 1647, A.D. 1590
> > on "Pancatantra".

Vaiyapuri Palm-leaves collection

A very valuable collection on palm leaves donated to the library in 1960. It belonged to the great scholar and historian, Prof. V.P.Pillai. The collection has 334 MSS in old Tamil, broadly dealing with Literary Classics, Religious texts, Linguistic work, such as dictionaries (in verse), grammatical works and collection of Proverbs. Some important vols. are :
> Mahabharatum,
> Nannul, 1682 (A grammatical work)
> Divakaram, 1702 (A dictionary in verse)

A check-list is available in Tamil language noting all

necessary particulars.

Manuscripts of Jibanananda Das

A Bengali collection of the eminent poet, Shri Jibanananda Das gifted to the library in 1979. Having 137 exercise books, 1 file and 14 loose items, the collection is rich in Bengali poems, Novels, short stories and articles written by this well known literatteur. Several of these have been published, English translations of some poems made by the poet are also available in the collection. A few of many noted works are :

Rupasi

Shikar

Banalata Sen

There are several other collections and MSS of the eminent scholars & personalities which are briefed as follows:

Hidayat Husain collection - 15 Vols. (Arabic & Persian) mainly on religion(Islam) biography etc.

Imambara collection - 140 vols. (Arabic & Persian) various subjects such as religion (mainly Islam), philosophy, history, literature etc.

Zakaria collection - 43 vols. (Arabic, Persian & Urdu) mainly on literature & few others.

Harinath Dey collection - 88 vols. (English) mainly on linguistics & literature, a few on Hinduism.

MSS of Sarojini Naidu - 4 vols. (English) mainly on poetry.

MSS of Mani Burdhan - 69 files (Bengali) on dance.

Ram Das Sen collection - 103 vols. (Sanskrit) various topics, such as Alankara, Mimamsa, Vaisnavism etc.

Rewa collection - 103 vols (Sanskrit) various subjects such as Alankara, Dharmasastra, Jyotisam etc.

MSS of Hari Das Nandy - 60 vols. (sanskrit) various subjects such as Advaita Vedanta, Samhita, Vaisnavism etc.

MSS of Vishnu Dey - 14 files (Bengali) on poetry

In addition to the above manuscript collections the

library has correspondence and diaries of prominent personalities. Let us describe a few of these.

Correspondence of Sir Tej Bahadur Sapru to and from 'elites of India and abroad. These letters mainly deal with the political situation of India during the early 20th century (covering a period of 45 years upto 1947) The letters are available in 105 bound volumes and 32 files.

Correspondence of two eminent historians, Sir Jadunath Sarkar and Dr. Govind Sardesai. There are about 1260 letters written to and from eminent people during the period 1909 to 1953.

Correspondence of Ramananda Chatterjee to and from various persons of India and abroad written during late 19th and early 20th century (from 1895 to 1942). These 188 letters and 6 articles mainly deal with the social and political condition of India with special reference to Bengal.

Correspondence of Netaji Subhas Chandra Bose written during, 1926 - 1938 to his nephew Dr. Ashok Nath Bose with special instruction to contact eminent people mainly to create sympathetic awareness and support towards India's independence. These are 154 letters.

Correspondence of Sarat Chandra Bose to his son Dr. Ashok Nath Bose during, 1931 to 1945 including his election manifesto issued from Switzerland in 1945. There are also letters to his brother Subhas Chandra Bose which make a total of 216 letters.

After describing the above holdings of MSS and correspondence a statistical detail is furnished in Annexure I to give an idea of the total number of such documents available in the library.

Our effort is on to prepare catalogues of all above mentioned holdings and we have been able to publish the following vols.

Asutosh Collection : Sarat Corner; Catalogue of Manuscripts,1980. (Hand List)

Bishnu Dey : Catalogue of Manuscripts, 1980 (Hand List)

Catalogue of Persian MSS in-Jadunath Sarkar Collection, 1972 (Minegraphed)

Catalogue Raisonneé of Buhar Library, Vol. 1, 1921.

Catalogue Raisonne of Buhar Library, Vol. 2, 1923.

Harinath Dey : Centenary Volume, 1977

Sapru Correspondence : A check List (First Series), 1961

Vaiyapuri Pillai Collection : Palm Leaf Manuscripts in Tamil; A check list, 1983 (hand List)

Upkeeping & Preservation

The library in its capacity is alert towards preservation of its MSS. Manuscripts, though kept in well-maintained air-conditioned area are given regular periodic checks, Necessary treatment is made available through different conservation skills and techniques which include binding. mending, deacidification, fumigation, lamination, encapsulation and micro-filming etc.

Many of the already described MSS collections and correspondence have been micro-filmed resulting in about 162 micro-film rolls. The library also records the availability of 182 micro-film rolls covering 1308 MSS with reference to Unesco - Govt. of India Project , 1966-67. These MSS which are mostly in Sanskrit, a few in Arabics & Persian etc. belong to 38 selected MSS centres of 12 leading cities of the country.

List of centres enclosed in Annexure-II.

Readers Services

Only the serious readers and researchers are allowed access to MSS and other rare vols. preferably on the basis of written evidence in support of their research work. We also take it as an essential part of our duty to maintain the agreement, if any, made regarding use of gifted documents. Reprographic services are available in the library and we allow reproduction of our holdings as per library rules. Reproduction of full text is permitted to institutions of repute under specific terms and conditions which often include reciprocal exchange in particular.

Future plan of action

There has been a feltneed to appoint scholars/Manuscripto-
logists to ensure proper editing and publishing of our manuscripts.
Helpful checklists have been prepared for a good number of
Tibetan Xylographs available in the library and we are in the
process to print its catalogue soon. Proper indexing of personal
diaries and letters have been given due importance and indexing
of MSS in Bengali and English Correspondence are under preparation
at present. The National Library welcomes gifts of MSS and the
library may also like to buy valuable MSS, if available. The
library will also try to get microfilms of copies of important
manuscripts and ancient documents on India from different countries
under the Cultural Exchange Programmes. It is proposed to adopt
modern techniques such as computerisation, micro-processing
etc. to facilitate all round MSS services. Considerable importance
has been given to internationally approved measures regarding
preservation & conservation of MSS which include improving awareness
of preservation problem as the basic and vital factor. Alongwith
response to advance training, national and international programmes
there are efforts to establish channels for regular exchange
of information with the countries within the region.

Conclusion

India is a vast country which has been laden with
serious social problems. Consequently the heavy loss to its
economy as well as to its culture as a whole did not exempt
its library and information services. In spite of all these circumstan-
ces of concern we have been trying to promote among other responsi-
bilities our all round library services as far as possible within
the available infrastructure. Our future lies in sharing of what
we have by exchanging our resources with similar institutions
at the national and international levels.

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Library Trends, Vol. 5, No. 3, January, 1957.

Biswas, S.C. papers on "Indian Manuscripts -- Collection.
    Documentation And Preservation -- A Summary Note"
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    of Cultural Heritage : Manuscripts and their future",
    organised by Raja Rammohan Roy Library foundation
    in Calcutta in 1990.

A Statement Showing The Total Number of Manuscript Available In The National Library, Calcutta

	Arabic	Persian	Urdu	Bengali	English	Hindi
Buhar Collection	467	483	2	-	-	-
Jadunath Sarkar Collection	-	206	-	-	62	-
Thibaut Collection	-	-	-	-	-	-
Vaiyapuri Pillai Collection	-	-	-	-	-	-
MSS of Jibanananda Das	-	-	-	9	-	-
Hidayat Husain Collection	9	6	-	-	-	-
Imambara Collection	72	68	-	-	-	-
Zakaria Collection	9	29	5	-	-	-
Harinath Dey Collection	-	-	-	-	88	-
MSS of Sarojini Naidu	-	-	-	-	4	-
MSS of Mani Bardhan	-	-	-	69	-	-
Ram Das Sen Collection	-	-	-	-	-	-
MSS of Sarat Chandra Chattopadhyay	-	-	-	21	-	-
Rewa Collection	-	-	-	-	-	-
Hari Das Nandy Collection	-	-	-	-	-	..'
MSS of Vishnu Dey	-	-	-	14	-	-
National Library and Others	124	163	14	68	101	5
TOTAL	681	955	21	181	255	5

Figure at a glance :

Paper Manuscripts	=	2,924
Correspondence & Diaries	=	250
Palm Leaves Manuscripts	=	334
Tibetan Xylographs	-	878

2:'5

NATIONAL LIBRARY, CALCUTTA

List of selected centres regarding microfilming of MSS under the Unesco-Govt. of India Project, 1966-67.

1.   Andhra University Library, Waltair, Hyderabad
2.   Asiatic Society of Bengal, Calcutta
3.   Asiatic Society of Bombay, Poona
4.   Assam State Museum (Kamrup Anusandhan Samiti)
5.   Bangiya Sahitya Parisad, Calcutta
6.   Bhandarkar Oriental Research Institute, Poona
7.   Bombay University Library, Poona
8.   Bhuri Singh Museum, Jammu
9.   Burdwan University Library, Burdwan
10. Bureau of Tamil Publications, Madras
11. Calcutta University Library, Calcutta
12. Dai-ra-tul Ma-arif-il-Osmania, Hyderabad
13. Deccan College, Poona
14. Govt. Oriental Mss. Library, Madras
15. Govt. Epigraphist for India, Delhi
16. H. P. T. College, Nasik
17. Historical & Antiquarian Studies, Assam
18. Indian Museum (Archaeological Survey), Calcutta
19. Khuda Baksh O. P. Library, Patna
20. (Shri) Mahavir Jain Public Library, Delhi
21. Nagpur University Library, Nagpur
22. National Library, Calcutta
23. National Museum, Delhi
24. Oriental Research Institute, Mysore
25. Oriental Research Institute & Mss. Library
        University of Kerala, Trivandrum
26. Osmania University Library, Hyderabad
27. Patna University Library, Patna
28. Raghunath Temple Library, Jammu
29. Salar Jung Museum, Hyderabad
30. Sanskrit College, Calcutta
31. Sayeedia Library, Hyderabad
32. State Archives, Hyderabad
33. State Archives, Srinagar
34. State Central Library, Hyderabad
35. State Chandradhari Museum, Dharbhanga
36. Venkateswar Oriental Research Institute, Tirupati, Madras
37. Victoria Memorial Hall, Calcutta
38. Tanjore Maharaj Serfoji Saraswati Mahal Library, Thanjavur.